1986. J. Gunn and J. Adovasio. The Antelope House Basketry Industry. In Archaeological Investigations at Antelope House, edited by D. Morris. U.S. Department of Interior, National Park Service, Washington, D.C. pp.306-397.

Chapter 20

The Antelope House Basketry Industry

Basketry, as discussed here, includes several distinct kinds of items, including rigid and semirigid containers, or baskets proper, matting and bags.

Matting includes items which are essentially two dimensional or flat; baskets are three dimensional. Bags may be viewed as intermediate forms, since they are two dimensional when empty and three dimensional when filled. As Driver (1961: 159) points out, these artifacts can be treated as a unit because the overall technique of manufacture is the same in all instances. Specifically, all forms of basketry are manually woven, without the aid of frame or loom. Since all basketry is woven, it is technically a class or variety of textile, although that term sometimes is restricted to cloth fabrics.

There are three major subclasses of basket weaves and these generally are mutually exclusive: twining, coiling and plaiting.

Twining denotes a subclass of basket weaves manufactured by passing moving (active) horizontal elements, called wefts, around stationary (passive) vertical elements, or warps. Twining techniques may be employed to produce containers, mats and bags, as well as fish traps, cradles, hats, clothing and other "atypical" basketry forms.

Coiling denotes a subclass of basket weaves manufactured by sewing stationary horizontal elements (the foundation) with moving vertical elements (stitches). Coiling techniques are used almost exclusively in the production of containers, hats and, rarely, bags. Mats and other forms are seldom, if ever, produced by coiling.

Plaiting denotes a subclass of basket weaves in which all elements pass over and under each other without engagement. For this reason, plaited basketry is technically described as unsewn. Plaiting may be used to make containers, bags and mats, as well as a wide range of other nonstandard forms.

Procedures

Some 616 complete or fragmentary specimens of basketry were recovered from Antelope House. These include 31 pieces of twining, 77 pieces of coiling, 466 pieces of plaiting and 42 complete or fragmentary miscellaneous fiber constructions not specifically assignable to any of the three major subclasses of basketry. (Analysis of an expanded sample is reported here; cf. Adovasio and Gunn 1975).

All of the specimens described and discussed here initially were cleaned of soil, bat or rodent dung and other surface contaminants, where necessary. The type and character of the contaminants was then tabulated. Visual exam-

ination was done with the aid of a seven-power hand lens or, where applicable and warranted, with a variable power stereoscopic microscope. In extreme cases of technical complexity or obscurity, specimens were carefully disassembled to insure proper recognition of the manufacturing techniques employed. All specimens were measured in metric units with a Helios needle-nosed dial caliper.

Twined basketry specimens were divided into five structural types, based on the number and sequence of warps engaged at each weft crossing and the spacing of the weft rows. All twined specimens were analyzed, where feasible, for selvage, method of starting, method of insertion of new warp and weft elements, method of preparation of warps and wefts, form, wear patterns, function, decorative patterns and mechanics, type and mechanics of mending and raw materials.

Coiled specimens were divided into 14 structural types, based on the kind of basket wall or foundation technique used and the type of stitch employed. All specimens were analyzed, where warranted, for type of rim finish, method of starting, work direction, decorative patterns and mechanics, type and mechanics of mending, form, wear patterns, function, method and preparation of foundation and sewing elements, raw materials and, where available, type of splice.

Plaited basketry specimens were divided into four structural types, based on interval of element engagement. Plaited specimens were analyzed for selvage treatment, shifts, method of preparation of elements, form, wear patterns, function, type and mechanics of mending and decorative patterns and mechanics.

Miscellaneous fiber constructions not directly assignable to any of the major Antelope House basketry subclasses and/or structural types were allocated to 11 arbitrary categories, based upon predominant technological, structural or formal attributes. All miscellaneous fiber constructions were analyzed for method of preparation of elements, wear patterns, function, decorative patterns and mechanics, type and mechanics of mending and raw materials.

The structural types and residual categories established by the above procedures and all other pertinent descriptive data are presented below.

It should be noted that the term "type" is used here purely as a classificatory label. Whether or not these types reflect fixed mental templates of the Antelope House basket makers is a question left to others. The descriptive terms utilized are those employed by Adovasio (1974a, 1976). For those unfamiliar with these terms, a glossary follows.

Glossary

The following glossary is not complete and is not intended as a guide to basketry analysis. Its sole purpose is to acquaint the reader with terms used in this chapter. Portions of this glossary are adapted from Mason (1904), Morris and Burgh (1941), Cressman (1942) and Adovasio (1974a).

Bunched Foundation—a coiling foundation composed of two or more elements placed side by side or in triangular arrangement so that the basket wall has a double thickness of elements in each coil. Synonym: Multiple foundation.

Bundle—a flexible foundation element of plant material used alone or in combination with rods in coiled basketry. It may consist of loose fibers, a mass of stems or twigs, a single shredded leaf or, rarely, cordage. The function of the bundle is to engage the stitches by which one coil is fastened to another as well as to provide a framework for the coil itself. Synonyms: Grass foundation, fiber foundation, multiple reed foundation.

Bundle with Rod Core—a foundation element in coiled basketry consisting of a single, usually whole rod surrounded by a fiber bundle. Synonym: Rod in bundle.

Center—the point at which the production of a coiled or twined basket or bag is initiated. Mats possess no center. There are several types of coiled centers including the so called normal or continuous coil type, the oval or flattened continuous coil type, the plaited center and the overhand knot center. Similarly, there are many types of twined centers based on the initial arrangement of the warps (see Mason 1904, Cressman 1942, Adovasio 1976). Synonym: Start.

Coil—the structural unit of coiled basketry. It consists of a foundation enclosed by a sheath formed by successive stitches.

Close Coiling—a variety of coiled basketry in which successive circuits of the coil are bound closely together by the stitches. The stitches in

this variety of coiling may be interlocking, non-interlocking or intentionally split on the non-work surface, work surface or on both surfaces.

Close Twining—a form of twined basketry in which the weft rows are so tightly spaced as to conceal the warp. Both simple and diagonal twining may employ this weft pattern, though it is more commonly used with simple twining for aesthetic effect.

Diagonal Twining—a common variety of twined basketry in which paired warps are alternately engaged at each weft crossing. Each successive weft row engages alternate warps of each pair, producing a diagonal effect on the surface of the finished item. The stitch slant may be S or Z and the weft rows may be closely spaced or spaced at intervals. Synonym: Twill twining.

Double Stitch—a pair of stitches sewn through a single hole made by the awl. Double stitches frequently are used as expansion stitches.

Expansion Stitch—an extra stitch (a double stitch or a wrapping stitch) used at or near the center of a coiled basket to keep the normal stitches from separating too widely, owing to the rapid expansion and sharp curve of the coiling spiral.

Fag End—the end of a stitch which is present on the work surface of a coiled basket. It marks the place where a new length of stitch is spliced on. It may be a visible stub or it may be a long end folded under the stitches. The stub may likewise be concealed under a stitch. At or near the same point on the non-work surface of the basket, the moving end of the exhausted stitch is present.

False Braid—an ornamental finish on the rim of a coiled basket. False braid is produced by manipulating a single stitch in various figure-8 patterns to produce a herringbone design.

Gap—the distance between successive stitches in coiled basketry. The gap may range from zero in well-made close coiled basketry to several centimeters in open coiled basketry. The term also is used to denote the distance between individual coils in open coiling.

Interlocking Stitch—a type of stitch in coiled basketry which passes diagonally through the top of the stitch immediately below. In so doing, it may pierce the foundation element or simply encircle it.

Intricate Stitch—a type of stitch used only in open coiling. It is produced by a manipulation of the sewing element so that it engages adjacent foundation units one or more times and is wrapped in a false knot around its standing portion to accomplish the spacing of the coils.

Interval—in plaited basketry, this term denotes the number of elements or strips in each set that are crossed over by strips in the other set. Intervals are usually designated numerically. In simple plaiting, the interval is under one over one (1/1). Any interval in excess of this (i.e., 2/2, 3/3, etc.) produces some variety of twill plaiting.

Moving End—the end of an exhausted stitch present on the non-work surface of a basket. The moving end may be a visible stub, long end folded under the stitches or close clipped end deeply buried in the coil itself. At or near the same point on the work surface of the basket, the fag end of the new stitch is present.

Non-Interlocking Stitch—a type of stitch in coiled basketry which engages the foundation of the coil below without passing through another stitch. In so doing, it may pierce the foundation or simply encircle it.

Non-Work Surface—the surface of a coiled basket upon which the sewing awl emerges. Synonyms: Back, left side, reverse stitches.

Open Coiling—a variety of coiled basketry in which the coils are not bound closely together, but are separated by the use of an intricate stitch. At the middle of each intricate stitch is a false knot of varying complexity. The intricate stitch may be used alone or in combination with wrapping stitches; the resultant fabric is open, with gaps exposed along the coil. Synonyms: Spaced coiling, sifter coiling, Fuegian coiling.

Open Twining—a form of twined basketry in which the weft rows are spaced at intervals and regularly expose the warp. Both simple and diagonal twining may employ this weft pattern.

Rod—a rigid or semirigid foundation element used alone or in combination with other rods, bundles or welts. It may consist of a stick, twig or reed, whether complete (whole) or split lengthwise (halved), with or without bark or cortex.

Self Rim—the rim of a coiled basket sewn in the same technique as the rest of the basket.

Selvage—the edge finish of a twined or plaited mat or bag or the rim of a twined or plaited container.

Shift—a sequence of changes in the interval of twill plaiting by which patterns in the fabric are produced. Shifts are employed in selvage treatments as well as in the general body of the fabric. Several different shifts often occur in the same specimen. The interval which ordinarily is 2/2 may be altered to 2/3, then altered again to 3/3 and so on.

Simple Twining—a common variety of twined basketry in which "single" warps are engaged between each weft crossing. Each succeeding weft row engages the same warps at the same interval. In this type of twining, warps may actually number more than one, but whatever their number, they function as a single unit. The stitch slant may be down to the left (S) or down to the right (Z) and the weft rows may be closely spaced or spaced at intervals. Synonym: Plain twining.

Splice—a point along a coil where one stitch ends and a new one is introduced. It is marked by the presence of one fag end on the work surface and the moving end on the non-work surface. In twined basketry, splice refers to the method of insertion of new warp and weft elements during construction.

Split Stitch—a type of stitch in coiled basketry which is bifurcated to receive a stitch from the coil immediately above it. Stitches may be regularly (that is, intentionally) split on the work, non-work and both surfaces. Accidental (that is, non-intentional) splitting may also occur on one or both surfaces through carelessness. Synonym: bifurcated stitch.

Stacked Foundation—a coiling foundation in which elements are arranged one above the other as logs in a cabin wall. Synonym: Vertical foundation.

Stitch—the element that is sewn over the foundation in coiled baskets. It may be a strip of wood, bark, leaf or plant fiber. Synonym: Splint.

Stitch Slant—a term used to denote the pitch or lean of the wefts in twined basketry. The stitch slant may be down to the left or down to the right. When the stitch slant is down to the left it is commonly called S, since the paired wefts have in fact been S-twisted when viewed in a vertical position. Conversely, the down to the right slant is called Z for the same reason. Stitch slant occasionally is altered in the same specimen for decorative effect.

Strips—the weaving elements in plaited basketry. Strips usually are long thin flat sections of leaf, bark, plant fiber or wood.

Tapered Twill—a technique of twill plaiting in which a curve is imparted to the wall of a container by decreasing the width of the plaiting strips as they approach the rim.

Twill Plaiting—a variety of plaited basketry in which the weaving elements pass over each other in intervals of two or more (2/3, 2/2, etc.). Synonyms: Twilling, chevron weave, herringbone weave, diagonal plaiting, twilled twos.

Weft—the moving horizontal element in twined basketry which engages the warps. Wefts usually are paired, although trebled and even quadrupled wefts are not unknown.

Welt—a foundation element in coiled basketry used in conjunction with one or more rods. A welt is a small flattened stick, twig or strip of fiber which is stacked vertically on a single rod or employed as the apex element in a bunched foundation. Synonym: Splint.

Work Direction—the direction in which a stitch is sewn along the foundation of a coiled basket.

Work Surface—the surface of a coiled basket on which the sewing awl is inserted to make a path for the stitch. Synonyms: Front, right side.

Wrapping Stitch—a stitch which makes a single revolution around a foundation unit without engaging any part of the coil below.

Wrapped Twining—a decorative as well as basic contruction technique in twined basketry. The technique makes use of a single element lying outside of the weft as it crosses the warp on the outer surface of the basket. Rather than following the weft behind the warp, it passes vertically between the two warps. The element is then brought out over the outer weft element, as it crosses the succeeding warp. The wrapping element never passes behind a warp. If wrapped twining is employed as a basic construction technique, there is one fixed weft (the inner weft) and one running weft (the outer weft).

Twining

The 31 pieces of twined basketry recovered are assigned to five structural types, which are described below by numerical prefix. Table 136 presents the distribution of twined basketry by type, raw materials used, period and provenience.

Table 136. Distribution of twined basketry by type, raw material, period and provenience.

Key
The first Roman numeral indicates twining type; the set of letters designates weft and warp material of specimen, in that order; the Arabic numeral gives number of specimens.

P = *Phragmites* sp.
S = *Scirpus* sp.
Sa = *Salix* sp.
T = *Typha* sp.
Y = *Yucca* sp.
Ya = *Yucca angustissima*
Yb = *Yucca baccata*

	South Area					*South Room Block*			
	South Plaza	*South Plaza Floor 2*	*Kiva D*	*Floor 1*	*Room 82*	*Tower Corridor Floor 1*	*Room 1*	*Room 9*	*Room 23*
BMIII									
PI									
PII				IV-YaS-1			II-YY-2		
PIII									IV-YaS-1
EPIII	V-YP-1 IV-TT-1 IV-YS-1	IV-YS-1	IV-YT-1						
MPIII					IV-TT-1			IV-ST-1	
LPIII	IV-YaS-1 IV-YaT-1					IV-YaS-1			
Navajo									
Unknown	IV-SS-1 IV-YT-1 IV-YaS-3								
TOTAL	10	1	1	1	1	1	2	1	1

	Central Room Block		*North Room Block*					*North Area*	
Room 29	*Kiva B Annex*	*Room 42*	*Room 6*	*Room 17 Floor 1*	*Room 18*	*Room 35*	*North Terrace*	*North Area*	Totals
									0
								III-YT-1	1
									3
									1
									5
II-YY-1			IV-YaYa-1						4
	IV-YaS-1	III-YbT-1		IV-YS-1					6
									0
					IV-YSa-1	I-YY-1 IV-YS-1	IV-YaS-1	IV-YS-2	11
1	1	1	1	1	1	2	1	3	31

Type I: Close Simple Twining, Z-Twist Weft
Number of specimens: 1.
Type of specimen: Wall fragment with selvage
Form represented: Petate.

Technique and Comments: This is plain twined weaving over single warps. Wefts are paired unspun elements; warps also are unspun. Weft rows are closely spaced to conceal warps. Warps are arranged radially and terminate in a three-element braided selvage formed by the exhausted weft rows. Immediately below the selvage, a series of five holes, *ca.* 2.15 mm in diameter, circumscribes the extant rim of the specimen. These holes presumably served as points of attachment for a cordage reinforcement. The center is absent, but the method of starting appears to be radial twining on the crossed warps. The specimen is flexible, undecorated, unmended, unpitched and not naturally watertight. Wear patterns are undiagnostic.

Measurements: Diameter of warps, 3 mm; diameter of wefts, 2 mm; warps per centimeter, 3; wefts per centimeter, 2; gap between weft rows, 0.

Figure 114. Type II sandal fragments; close simple twining, S-twist weft.

Type II: Close Simple Twining, S-Twist Weft
(Fig. 114)
Number of specimens: 3.
Type of specimens: Wall fragments with selvage.
Forms represented: Sandals.

Technique and Comments: This is plain twined weaving over single warps. Warps and wefts are 2-ply Z-spun S-twist cordage. Weft rows are closely spaced to conceal warps. No end selvages are present; side selvages are identical in all specimens. Wefts at the final warp crossing are folded at right angles to the weft row (parallel to the terminal warp), then rewoven back into the body of the specimen to form the next weft row. This selvage treatment is hereafter called continuous weft. One specimen has new wefts inserted via an overhand knot splice with the exhausted weft course. All specimens are flexible, undecorated, unmended, unpitched and not naturally watertight. All specimens exhibit heavy wear on one surface and moderate wear on the other.

Measurements. Range in diameter of warps, 1–2 mm; mean diameter of warps, 1.66 mm; range in diameter of wefts, 1 mm; mean diameter of wefts, 1 mm; range in warps per centimeter, 3–6; mean warps per centimeter, 4.33; range in wefts per centimeter, 11–30; mean wefts per centimeter, 17.66; range in gap between weft rows, 0.

Type III: Open Simple Twining, Z-Twist Weft
Number of specimens: 2.
Type of specimens: End selvages.
Forms represented: Matting.

Technique and Comments: This is plain twined weaving over "single" warps. In one specimen, the warp is actually a single element; in the other, three bunched warps function as a unit. The paired wefts are 2-ply S-spun Z-twist cordage; warps are unspun. Although only the final weft row is present on both specimens, it is clear that wefts were spaced at intervals to expose warps. Specimens are flexible. End selvage treatment consists of folding the warps at a 180° angle back into the terminal weft crossing, where they are then truncated. After each warp crossing, wefts are reinforced with an overhand knot before engaging the next warp. This technique minimizes fraying of the selvage and provides

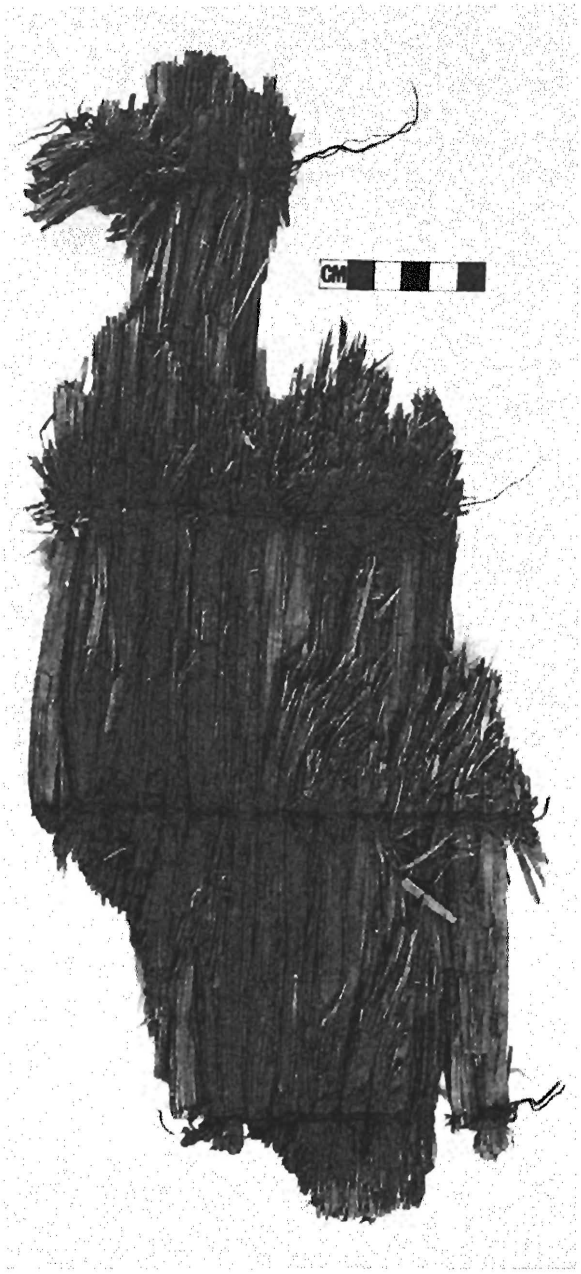


Figure 116. Type IV mat fragment with twilled selvage.

Figure 115 (left). Type IV mat fragment; open simple twining, S-twist weft.

additional rigidity to the edge of the mat. Both specimens are undecorated, unpitched and not naturally watertight. In one specimen, the weft row has been mended twice via splicing with a square and a double overhand knot. Wear patterns are pronounced on both surfaces of each specimen.

Measurements: Range in diameter of warps, 3.90–24.85 mm; mean diameter of warps, 13.38 mm; diameter of wefts, 3.20 mm; warps per centimeter, 1; wefts per centimeter, 1.

Type IV: Open Simple Twining, S-Twist Weft
(Fig. 115, 116, 117)
Number of specimens: 24.
Type of specimens: Complete, 1; wall fragments with selvage, 5; wall fragments without selvage, 18.
Forms represented: Bag, 1; matting, 23.

Technique and Comments. This is plain twined weaving over "single" warps. In nine specimens, the warp is a single element; the remaining specimens include examples of doubled (2), trebled (7) and quadrupled (6) warps functioning as unitary elements. Wefts are always paired and in-

Figure 117. Type IV bag fragment; open simple twining, S-twist weft, with 180° folded selvage.

clude 22 examples of 2-ply Z-spun S-twist cordage and two examples of unspun fiber. Weft rows are spaced at intervals to expose warps. Specimens are flexible. Side selvages of the fragmentary specimens include three examples in which the weft row is terminated with an overhand knot. End selvages include one example in which the warps are simply truncated about 2 cm after the final weft row and one example in which warps are consistently folded at a 122° angle and plaited in a 2/2 interval. The complete specimen of this type is a unique elongate bag made of a single small *Yucca* sp. plant with the stem truncated. The leaves of the plant form the warps, which are radially twined with 2-ply unspun wefts. End selvage is of the 180° variety. New wefts are added via overhand knot splices to exhausted weft rows. All specimens are undecorated, unmended, unpitched and not naturally watertight. The matting fragments exhibit moderate to heavy wear on one or both surfaces.

Measurements: Range in diameter of warps, 2.6–12.30 mm; mean diameter of warps, 11.86 mm; range in diameter of wefts, 1–3.40 mm; mean diameter of wefts, 2.10 mm; range in warps per centimeter, 0.8–3; mean warps per centimeter, 1.46; wefts per centimeter, 1; range in gap between weft rows, 15–151 mm; mean gap between weft rows, 22.1 mm.

Type V: Open Diagonal Twining, S-Twist Weft (Fig. 118)
Number of specimens: 1.
Type of specimen: Wall fragment without selvage.
Form represented: Matting.

Technique and Comments: This is diagonal twined weaving over paired warps. The paired wefts are 2-ply S-spun Z-twist cordage; warps are undecorticated cane. Weft rows are irregularly spaced at intervals to expose warps. Specimen is flexible, undecorated, unmended, unpitched and not naturally watertight. Weft rows exhibit heavy attrition wear, while the cane warps show sheen from extensive use on both sides.

Measurements: Diameter of warps, 11.9 mm; diameter of wefts, 1.85 mm; warps per centimeter, 1; wefts per centimeter, 1; mean gap between weft rows, 6.8 cm.

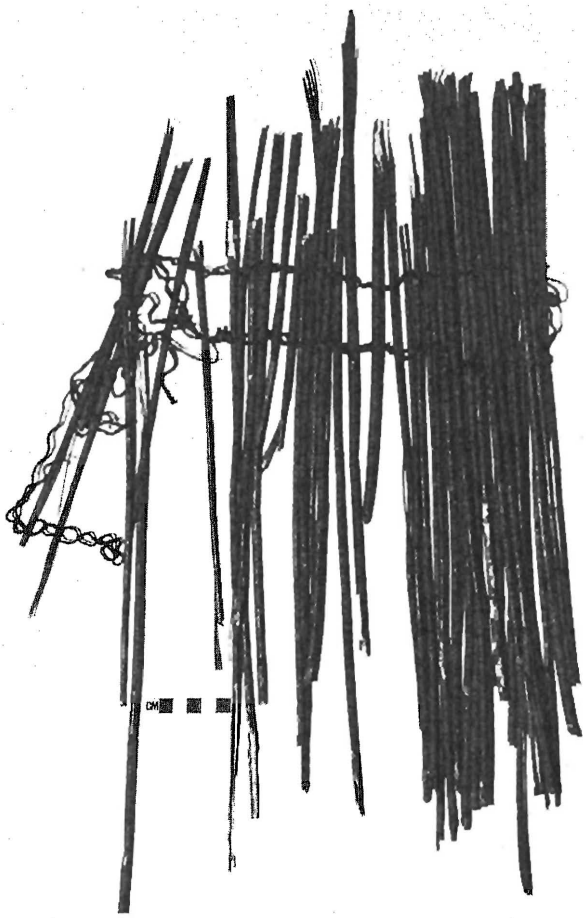


Figure 118. Type V mat fragment; open diagonal twining, S-twist weft.

Coiling

The 77 pieces of coiled basketry recovered from Antelope House are assigned to 14 structural types, which are described below by numerical prefix. Table 137 presents the distribution of coiled basketry by type, raw materials used, period and provenience.

Type VI: Close Coiling, Bundle Foundation, Stitch Type Unknown
Number of specimens: 1.
Type of Specimen: Base fragment.
Form represented: Unknown.
Work Direction: Right to left.

Technique and Comments: Strictly speaking, this "type" is not a type, since no stitch variety is positively distinguishable. The specimen is the initial, complete circuit of a base with a foundation consisting of a retted fiber bundle. Method of starting is continuous coil. The extant stitches appear to be non-interlocking, but this is no guarantee that the rest of the specimen was sewn with this variety of stitch. Stitches are closely spaced and conceal the foundation. The specimen is semiflexible. Work surface and all other pertinent details of construction are not discernible. The extant circuit, or coil, is undecorated, unmended, unpitched and not naturally watertight. There are no wear patterns.

Type VII: Close Coiling, Whole Rod Foundation, Interlocking Stitch (Fig. 119 through 122)
Number of specimens: 26.
Type of Specimens: Complete, 3; wall fragments, 4; rim fragments, 4; base fragments, 14; handles, 1.
Forms represented: Shallow trays, 18; shallow bowls, 5; unknown, 3.
Work direction: Right to left.

Figure 119. Type VII base fragment of tray; close coiling, whole rod foundation, interlocking stitch, with reinforced continuous coil center; work surface.

Table 137. Distribution of coiled basketry by type, raw materials, period and provenience.

Key
The first Roman numeral indicates coiling type; the set of letters designates foundation, stitch, and, if present, bundle material of specimen, in that order; the Arabic numeral gives number of specimens.

S = *Salix* sp.
R = *Rhus* sp.
Y = *Yucca* (unknown species)
Ya = *Yucca angustissima*
U = Unknown

	South Area		*South Room Block*						
	South Plaza	*Kiva D*	*Structure 8*	*Room 82*	*Room 1*	*Room 9*	*Room 21*	*Room 22*	*Room 23*
BMIII									
PI			XVII-SSY-1						
PII	XVII-SSY-1	XVI-RRY-1 XVII-SRY-1			VII-SR-1				
PIII	XVII-RRY-1								XVII-URY-1
EPIII	VII-SR-4 XVII-UY-1 XVII-SSY-1	XVII-SSY-1			VII-SR-1		XVII-SSY-1	VII-RR-1	
MPIII				VII-SR-1			VII-RR-2 VII-SR-1		
LPIII	VI-SR-1 XVII-SYaT-1				VII-RR-1	XVII-RSY-1	VII-RR-1 XVII-SR-2		
Navajo	VII-SR-2 XVII-SSY-1	XI-RR-1							
Unknown	VII-RR-1 XIII-SSY-1 XVII-SSY-1								
TOTAL	16	4	1	1	3	1	7	1	1

Central Room Block

Room 29	*Room 29 Floor 3*	*Room 29 Burial 11*	*Room 30*	*Kiva B*	*Kiva B Annex*	*Room 32*	*Room 40*	*Room 42*
VII-SR-3 XII-SYY-1 XVII-SSY-1								
VII-RR-1		XVII-SSY-1	VII-SS-1					
	XVII-SSY-1		VII-SR-1 XI-RR-1	VI-YR-1 XVII-RRY-1	XV-SS-1 XVII-SSY-2	XVII-SSY-2	X-RYaY-1	XVII-SSY-1
6	1	1	3	2	3	2	1	1

continued

Table 137. Distribution of coiled basketry by type, raw materials, period and provenience—Continued

Key
The first Roman numeral indicates coiling type; the set of letters designates foundation, stitch, and, if present, bundle material of specimen, in that order; the Arabic numeral gives number of specimens.

S = *Salix* sp.
R = *Rhus* sp.
Y = *Yucca* (unknown species)
Ya = *Yucca angustissima*
U = Unknown

North Room Block

	Room 44	*Room 48 Floor 1*	*Room 54 Floor 1*	*Room 5*	*Room 6*	*Room 17*	*Room 38*	*Room 46*
BMIII			XIX-RR-1					
PI								
PII								
PIII								
EPIII								
MPIII								
LPIII	XIV-SS-1 XVII-SSY-2			XVII-SSY-1	VII-SR-1	XVII-SRY-1	VIII-RR-1	VII-RR-1
Navajo								
Unknown		XVII-SRYa-2						
TOTAL	3	2	1	1	1	1	1	1

		North Area	
Structure 66	*North Terrace*	*North Area*	Totals
			1
XVII-SSY-1	XVI-RRY-1 XVII-SSY-1 XVII-RRY-1		5
			9
		XVIII-SS-1	3
			10
	VIII-RR-1		8
	VII-RR-1 IX-SS-1		29
			4
XVII-SSY-1	XVII-SSY-2		8
2	8	1	77

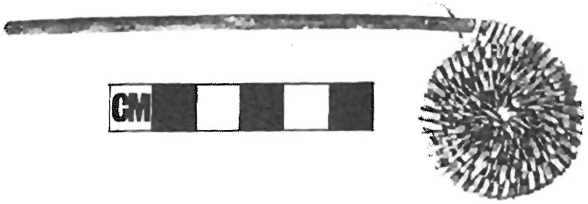


Figure 120. Type VII base fragment of tray, with continuous coil center; work surface.

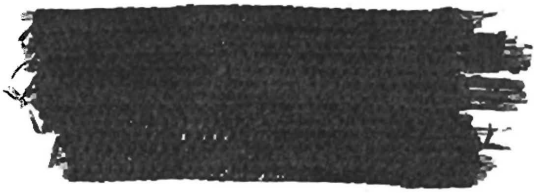


Figure 122. Type VII "handle" fragment; note double self rim and binding stitch mend; non-work surface.

Figure 121. Type VII complete shallow bowl; not splices with fag ends bound under and self rim; work surface.

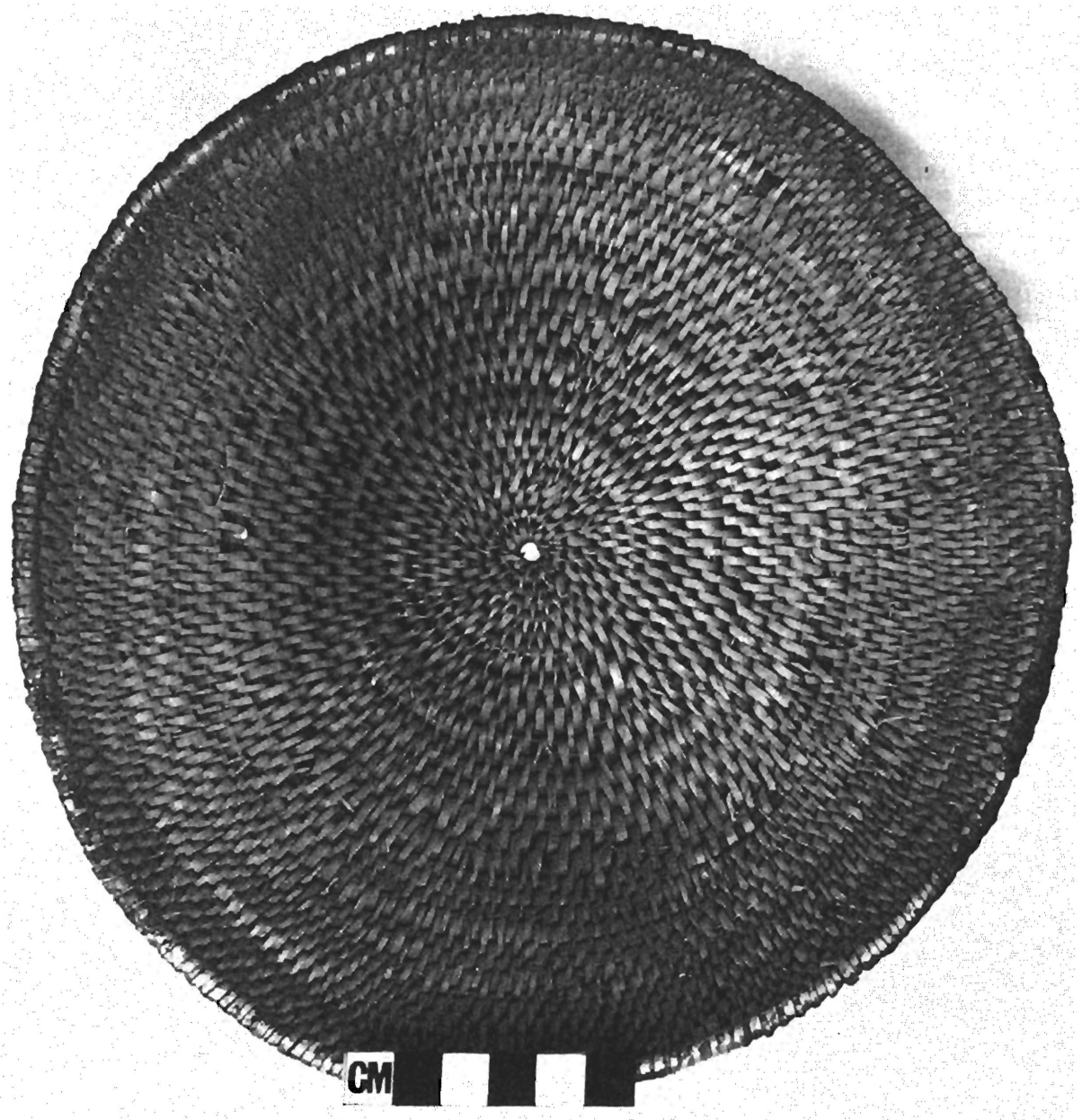


Figure 123. Type VIII base fragment of tray; close coiling, whole rod foundation, non-interlocking stitch, with continuous coil center; non-work surface.

Technique and Comments: A single whole rod is sewn with interlocking stitches, which wrap rather than pierce the rod. In 13 specimens, the cortex (or bark) is left on the rods; in the remainder, rods are decorticated. Fifteen specimens exhibit accidental splitting on the non-work surface only. There is a gap between the stitches exposing the foundation on 11 specimens. Work surface is concave on 17 specimens and convex on six. The work surface is not discernible on the remaining specimens. All representatives of this type are rigid. Centers include nine continuous coil, five reinforced continuous coil and two oval. Rim finishes include six self and one false braid in a 2/2 interval. The complete specimens include two sloping wall shallow bowls and one miniature bowl. The "handle" consists of 14 rods laid side by side with a "rim" on both margins. Handled baskets are very rare in Anasazi sites and the true function of this specimen is unknown. All specimens are undecorated and unpitched. Three are naturally watertight, due to the tightness of the weave. Two specimens, including one base fragment and the "handle," have been mended by addition of a row of binding stitches to two or more adjacent coils. Splices include 12 examples of fag and moving ends bound under, four of fag ends clipped short and moving ends bound under, and one each of fag and moving ends clipped short, and fag ends clipped short and concealed under stitch with moving ends bound under. On one specimen, fag ends are clipped short and moving ends are obliterated by heavy wear. Eight specimens exhibit moderate to heavy wear. Five are worn on the non-work surface, one on the work surface, and two on both surfaces.

Measurements (all specimens): Range in diameter of coils, 2–7 mm; mean diameter of coils, 3.9 mm; range in width of stitches, 1–3 mm; mean width of stitches, 2.13 mm; range in gap between stitches, 0–5.35 mm; mean gap between stitches, 0.84 mm; range in coils per centimeter, 1–4; mean coils per centimeter, 2.72; range in stitches per centimeter, 2.5–8; mean stitches per centimeter, 4.16.

Measurements (complete specimens): Container 1—maximum diameter of rim, 205 mm; maximum diameter of base, 125 mm; maximum depth, 80 mm. Container 2—maximum diameter of rim, 219 mm; maximum diameter of base, 113 cm; maximum depth, 61 mm. Container 3—maximum diameter of rim, 24 mm; maximum diameter of base, 13 mm; maximum depth, 11 mm.

Type VIII: Close Coiling, Whole Rod Foundation, Non-Interlocking Stitch (Fig. 123)
Number of specimens: 2.
Type of specimens: Base fragments.
Forms represented: Shallow trays.
Work direction: Right to left, 1; left to right, 1

Technique and Comments: A single whole rod is sewn with non-interlocking stitches, which wrap rather than pierce the rod. In one specimen, the cortex is left on the rods; in the other, rods are decorticated. One specimen exhibits accidental splitting of the stitches on both surfaces, while the other shows accidental splitting on the non-work surface only. There is an occasional gap between the stitches exposing the foundation on both specimens. Work surface is concave. Specimens are rigid. Both centers are continuous coil. The specimens are undecorated, unmended, unpitched and not naturally watertight. Splices have fag and moving ends bound under. No wear patterns are discernible.

Measurements: Range in diameter of coils, 2.5–4 mm; mean diameter of coils, 3 mm; range in width of stitches, 2–3 mm; mean width of stitches, 2.58 mm; range in gap between stitches, 0–2 mm; mean gap between stitches, 0.83 mm; range in coils per centimeter, 3–4; mean coils per centimeter, 3.5; range in stitches per centimeter, 4–6; mean stitches per centimeter, 5.

Type IX: Close Coiling, Two-Rod Horizontal Foundation, Non-Interlocking Stitch (Fig. 124)
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Unknown.
Work direction: Right to left.

Figure 124. Type IX wall fragment; close coiling, two rod horizontal foundation, non-interlocking stitch; non-work surface.

Technique and Comments: Two decorticated whole rods arranged horizontally (side-by-side) are sewn with non-interlocking stitches, which wrap rather than pierce the rods. Some accidental splitting of the stitches occurs on both surfaces. There is no gap between the stitches. Work surface is not detectable. Specimen is rigid, undecorated, unmended and unpitched, although probably watertight owing to the extreme tightness of the weave. Because the specimen is fragmentary, splice type and wear patterns are not discernible.

Measurements: Diameter of coils, 1.25 mm; width of stitches, 0.88 mm; gap between stitches, 0; stitches per centimeter, 8.

Type X: Close Coiling, Rod with Lateral Bundle Foundation, Non-Interlocking Stitch (Fig. 125)
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Shallow tray.
Work direction: Right to left.

Technique and Comments: A single decorticated whole rod and a horizontally arranged retted fiber bundle are sewn with interlocking stitches. The bundle is laid on the convex, or outer, surface and the rod on the concave, or inner, surface of the basket. The size of the bundle is two to three times that of the rod. A small portion of the bundle is drawn around the top and bottom of the rod, providing points of engagement for the stitches. Some accidental splitting of the stitches occurs on the non-work surface. There is no gap between the stitches. Work surface is concave. The specimen is rigid, undecorated, unmended and unpitched, but is watertight owing to the tightness of the weave. Splice type is not discernible. Wear is pronounced on the convex surface, while a heavy use sheen is present on the concave surface.

Measurements: Diameter of coils, 10.12 mm; width of stitches, 2.58 mm; gap between stitches, 0; coils per centimeter, 1; stitches per centimeter, 4.

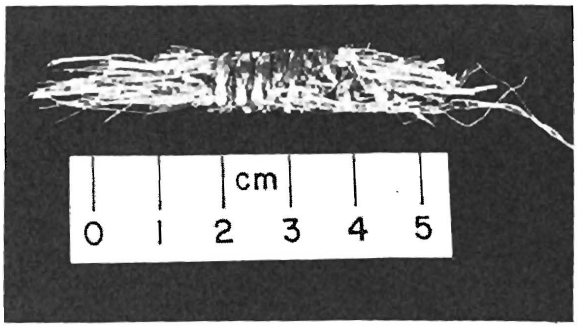


Figure 125. Type X wall fragment of tray; close coiling, rod with lateral bundle foundation, non-interlocking stitch; non-work surface.

Type XI: Close Coiling, Two-Rod Stacked Foundation, Non-Interlocking Stitch (Fig. 126)
Number of specimens: 2.
Type of specimens: Wall fragment, 1; "handle," 1.
Forms represented: Shallow tray, 1; unknown, 1.
Work direction: Right to left, 2.

Technique and Comments: Two whole rods arranged vertically (one above the other) are sewn with stitches that wrap rather than pierce the rods. In the tray fragment, a decorticated rod is sewn with non-interlocking stitches accidentally split on both surfaces; in the "handle," a figure-8 stitch is employed. There is a small gap between the stitches exposing the foundation on the "handle" fragment. Work surface is concave on the tray fragment and both specimens are rigid. The "handle" is finished with a self rim on both margins. Both specimens are undecorated, unmended and unpitched. The tray fragment is watertight, owing to the tightness of the weave. Splices in the "handle" have "moving" ends and "fag" ends bound under. No wear patterns are discernible on either specimen. As is the case with the so-called "handle" in Type VII, there is no conclusive evidence that the specimen necessarily served that function.

Measurements: Range in diameter of coils, 4.5–6 mm; mean diameter of coils, 5.16 mm; range in width of stitches, 2–3 mm; mean width of stitches, 2.62 mm; range in gap between stitches (one specimen only), 0–15 mm; mean gap between stitches (one specimen only), 0.5

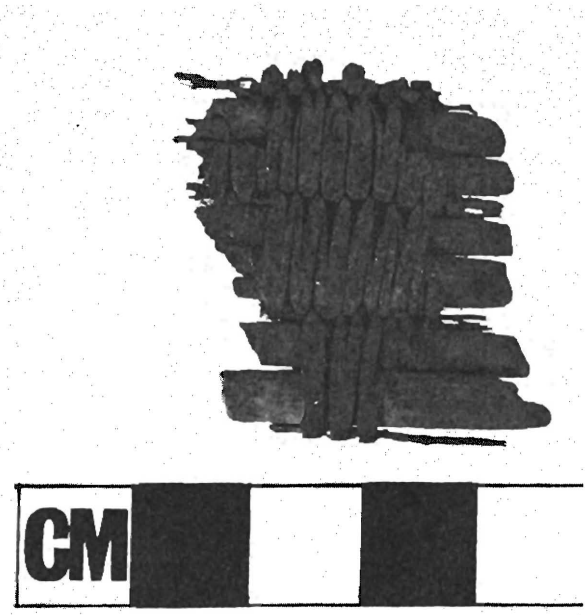


Figure 126. Type XI wall fragment of shallow tray; close coiling, two rod stacked foundation, non-interlocking stitch; non-work surface.

mm; range in coils per centimeter, 1.5–2; mean coils per centimeter, 1.75; range in stitches per centimeter, 3.5–4; mean stitches per centimeter, 3.75.

Type XII: Close Coiling, Whole Rod and Bundle Stacked Foundation, Non-Interlocking Stitch (Fig. 127)
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Shallow tray.
Work direction: Left to right.

Technique and Comments: A single whole rod and a retted fiber bundle are sewn with non-interlocking stitches, which pierce the bundle. Some accidental splitting of the stitches occurs on the non-work surface. There is no gap between the stitches. Work surface is concave. The specimen is semiflexible, undecorated, unmended and unpitched, but is naturally watertight owing to the tightness of the weave. Splice type is not discernible. Heavy wear occurs on both surfaces.

Measurements: Diameter of coils, 3.75 mm; width of stitches, 3 mm; gap between stitches, 0; coils per centimeter, 1.25; stitches per centimeter, 3.

Figure 127. Type XII wall fragment of shallow tray; close coiling, whole rod and bundle stacked foundation, non-interlocking stitch; non-work surface.

Type XIII: Close Coiling, Two-Rod and Bundle Stacked Foundation, Non-Interlocking Stitch
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Steep-sided bowl.
Work direction: Right to left.

Technique and Comments: Two decorticated whole rods and a retted fiber bundle are sewn with non-interlocking stitches, which pierce the bundle. Some accidental splitting of the stitches occurs on the work surface. There is a gap between the stitches exposing the foundation. Work surface is convex. The specimen is rigid, undecorated, unmended, unpitched and not naturally watertight. Splice type is not discernible. Heavy wear is present on the convex surface.

Measurements: Diameter of coils, 6.19 mm; width of stitches, 2.2 mm; gap between stitches, 1.93 mm; coils per centimeter, 1; stitches per centimeter, 4.5.

Type XIV: Close Coiling, Two-Rod and Welt Bunched Foundation, Non-Interlocking Stitch (Fig. 128)
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Shallow tray.
Work direction: Right to left.

Technique and Comments: Two whole decorticated rods arranged horizontally and surmounted by a flat welt are sewn with non-interlocking stitches, which wrap rather than pierce the welt. Some accidental splitting of the stitches occurs on both surfaces. There is no gap between the stitches. Work surface is concave. The specimen is rigid, undecorated, unmended, unpitched and not naturally watertight. Splices and fag and moving ends are bound under. Wear

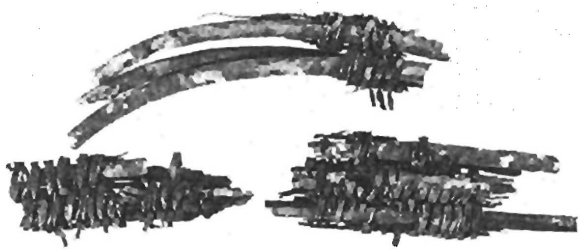


Figure 128. Type XIV wall fragments of shallow tray; close coiling, two rod and welt bunched foundation, non-interlocking stitch; work surface.

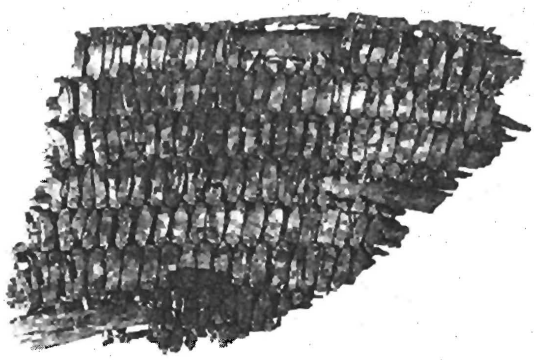


Figure 129. Type XV wall fragment of shallow parching tray; close coiling, three rod bunched foundation, non-interlocking stitch; work surface.

Figure 130. Type XVI rim fragment of shallow bowl; close coiling, two rod and bundle bunched foundation, inter-locking stitch; note self rim; non-work surface.

patterns are not discernible on this highly fragmentary specimen.

Measurements: Diameter of coils, 5.5 mm; width of stitches, 1.75 mm; gap between stitches, 0; coils per centimeter, 2; stitches per centimeter, 5.

Type XV: Close Coiling, Three-Rod Bunched Foundation, Non-Interlocking Stitch (Fig. 129)
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Shallow tray.
Work direction: Right to left.

Technique and Comments: Two whole decorticated rods arranged horizontally and surmounted by a third whole decorticated rod are sewn with non-interlocking stitches. The third, or apex, rod is much smaller in diameter than the other two and is wrapped, rather than pierced, by the stitches. Some accidental splitting of the stitches occurs on both surfaces. There is a gap between the stitches exposing the foundation. Work surface is concave. The specimen is rigid, undecorated, unmended, and unpitched, but is naturally watertight owing to the tightness of the weave. Splices have fag and moving ends clipped short. Heavy wear is present on the convex surface, while the concave surface exhibits extensive charring, suggesting that the specimen is part of a parching tray.

Measurements: Diameter of coils, 5.75 mm; width of stitches, 1.75 mm; gap between stitches, 1 mm; coils per centimeter, 2; stitches per centimeter, 4.

Type XVI: Close Coiling, Two-Rod and Bundle Bunched Foundation, Interlocking Stitch (Fig. 130)
Number of specimens: 2.
Type of specimens: Rim fragment, 1; base fragment, 1.
Forms represented: Bowl, 1; unknown, 1.
Work direction: Right to left, 2.

Technique and Comments: Two whole rods arranged horizontally and surmounted by a retted fiber bundle are sewn with interlocking stitches, which wrap rather than pierce the bundle. In one specimen, the cortex is left on the rods; in the other, rods are decorticated. One specimen exhibits accidental splitting of the stitches on both surfaces, while the other shows accidental splitting on the non-work surface only. There is no gap between the stitches. Work surface is convex on one specimen and undetectable on the other. The base fragment has a continuous coil center and its rim is a variation of the self type. A row of wrapping stitches has been added to the rim to fill the interstices of the terminal circuit of construction stitches. Both specimens are rigid, undecorated, unmended and unpitched, although one is naturally watertight owing to the tightness of the weave. Splices have fag and moving ends bound under. There are no wear patterns.

Measurements: Range in diameter of coils,

4.5–5 mm; mean diameter of coils, 4.75 mm; range in width of stitches, 2–2.5 mm; mean width of stitches, 2.25 mm; range of gap between stitches, 0; range in coils per centimeter, 2.5–4; mean coils per centimeter, 3.25; range in stitches per centimeter, 4–4.5; mean stitches per centimeter, 4.25.

Type XVII: Close Coiling, Two-Rod and Bundle Bunched Foundation, Non-Interlocking Stitch (Fig. 131)

Number of specimens: 36.

Type of specimens: Complete, 3; wall fragments, 25; rim fragments, 4; base fragments, 4.

Forms represented: Shallow trays, 22; steep-sided bowls, 8; bifurcated base ceremonial baskets, 2; carrying basket, 1; unknown, 3.

Work direction: Right to left, 32; left to right, 1; unknown 3.

Technique and Comments: Two whole rods arranged horizontally and surmounted by a retted fiber bundle are sewn with non-interlocking stitches, which pierce the bundles. In one example of this type, the stitches which pierce the bundles also pierce the foundation rods. In eight specimens, the cortex is left on the rods; in the remainder, rods are decorticated. Twenty-two specimens exhibit accidental splitting of the stitches on both surfaces, and there are three examples each of accidental splitting on the work or non-work surface only. There is a gap between the stitches exposing the foundation on eight specimens. Work surface is concave on 22 specimens and convex on eight; the work surface is not detectable on the remaining specimens. All examples of this type are rigid. The fragmentary specimens include four continuous coil centers, two of which have apertures; three self rims, and one false braid rim in a 2/2 interval. None of the fragments is pitched, although 25 are naturally watertight owing to the tightness of the weave. One specimen has been mended by replacing the fiber bundle with a complete circuit of Type XVII coiling taken from another basket. The alien coil is much smaller in diameter than the coil onto which it has been grafted and serves the same function as a normal bundle. The work surface of the alien coil is the reverse of that of the specimen to which it has been spliced. One wall fragment and one large rim fragment of two separate carrying baskets are decorated with geometric designs (Fig. 132, 133) produced by inserting rows of darker stitches at varying intervals. The decorative technique is identical to that described and figured by Morris and Burgh (1942: Fig. 10a). The decorated rim fragment was found in association with an approximately 20 cm length of 2-ply S-spun Z-twist cordate (diameter of cordage, 3 mm; twists per centimeter, 3) and four pieces of worked wood. Splices of the fragments include 10 examples of fag and moving ends bound under; four of fag and moving ends clipped short, and one each of fag ends clipped short and moving ends bound under, fag ends bound under and moving ends clipped short, and fag ends clipped short with moving ends clipped and concealed under stitches. In one specimen, the moving end is clipped short and concealed under stitches, while the fag end is obscured by wear. In another, the moving end is bound under and the fag ends are obliterated by use. Nine frag-

Figure 131. Type XVII wall fragment of shallow tray; close coiling, two rod and bundle bunched foundation, non-interlocking stitch; note self rim; non-work surface.

Figure 132. Geometric design from carrying basket rim fragment.

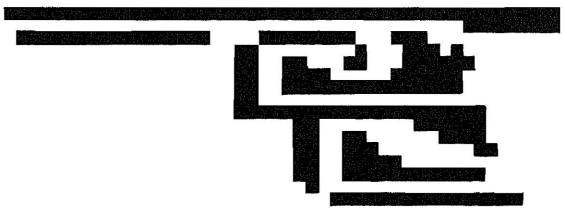


Figure 133. Geometric design from carrying basket wall fragment.

ments exhibit heavy wear on both surfaces; five have wear on the work surface only; one has wear on the work surface and use sheen on the non-work surface; and one has use sheen on the work surface only. Three fragments are heavily charred on the work surface, indicating that they are portions of parching trays. The complete or nearly complete specimens of Type XVII coiling are individually described below:

Container 1 (Fig. 134):

This specimen is a flat-bottomed bowl with nearly vertical walls. The rim is of the self type; the center is absent. The specimen is undecorated, unmended, unpitched and naturally watertight. Splices have fag ends clipped short and moving ends bound under. There is heavy wear on the non-work (interior) surface of this specimen and moderate to heavy wear on the work (exterior) surface.

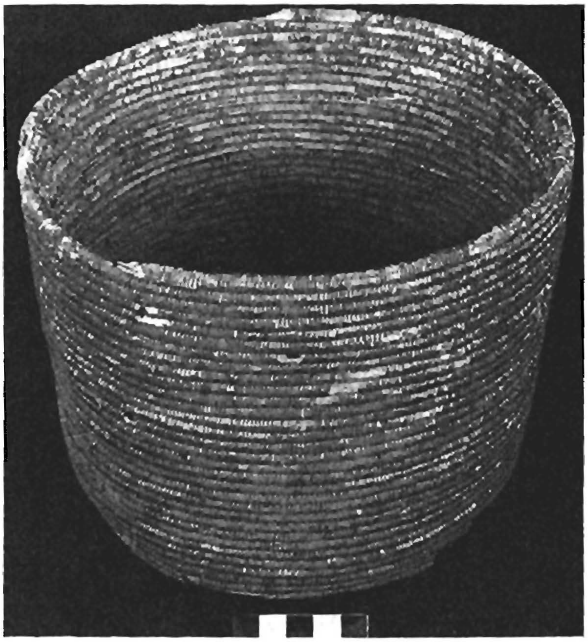
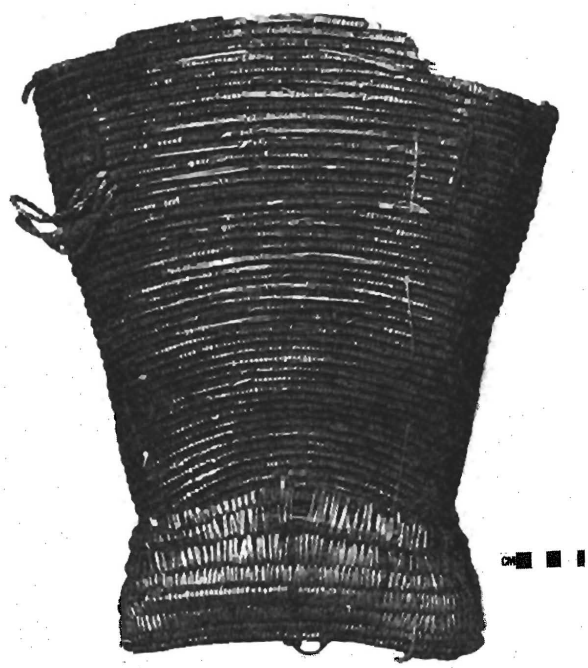


Figure 134. Type XVII complete steep-sided bowl minus final rim circuit. Work surface is convex.

Container 2 (Fig. 135):

This specimen is a bifurcated base ceremonial basket and is virtually identical in configuration to the Class B coiled forms described and figured by Morris and Burgh (1942: 27–28, Fig. 11). The specimen is oval in cross section, with a slightly excurvate rim and incurvate base. The final rim circuit and the original base and center are missing. Two burden ties of 2-ply S-twisted sinew (diameter 1.7 mm) are located on the rear wall of the specimen approximately 6 cm below the extant rim. These ties encircle five circuits of foundation and are spaced approximately 202 cm apart. They are attached to the basket wall with granny knots. One of the burden ties is loosely bound with several circuits of 2-ply S-spun Z-twist *Yucca* sp. fiber cordage (diameter 2.1 mm) secured with a square knot. At some point in its history, the original (and presumably well worn) base and center of this container were replaced with eight spliced coils clearly produced by a hand other than that of the original manufacturer. Splicing is done with simple running stitches; these added coils are open and do not seal the base of the basket. The basal aperture apparently was closed by stitching several lengths of cordage across the opening. One of the pieces of cordage is 3-ply S-spun Z-twist (diameter 3 mm) and is "rat-tailed," while the other is 2-ply S-spun Z-twist (diameter 2 mm). Both are secured to opposing margins of the base with overhand knots. After the base of the specimen was

Figure 135. Type XXVII complete bifurcated base ceremonial basket; note spliced base, burden ties and cotton running stitches; work surface.

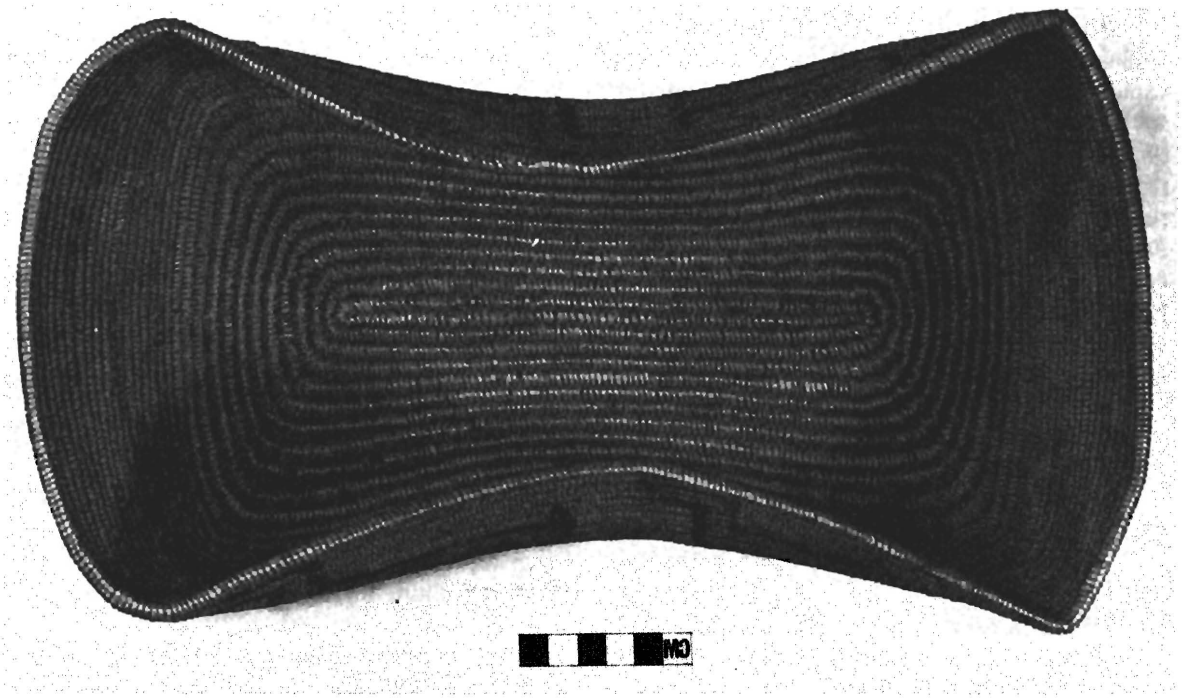


replaced, a length of 5-ply S-spun Z-twist cotton cordage was attached with a running stitch to one lateral margin of the basket. This stitch runs the length of the basket. Its function is unknown. The container is undecorated, unpitched and naturally watertight. Splices of both the original and added coils have both fag and moving ends bound under. There is heavy wear on the outer surface of the basket and light wear on the interior.

Container 3 (Fig. 136):

This hourglass-shaped, flat-bottomed tray is not only the finest complete specimen of coiling from Antelope House, but is also the finest representative of its configuration ever recovered from any archeological site in the Southwest. The specimen is basically rectangular in plan, with intentionally incurvate lateral walls (long margins) and slightly excurvate terminal walls (short margins). Method of starting is a flattened continuous coil. After the first five circuits of the base, the coils gradually assume the hourglass plan of the finished specimen, leaving no doubt that this highly unusual configuration is intentional. The rim for most of the final circuit is of the self type, with the last 61.5 mm done in a 1/1 false braid. The specimen is unmended, unpitched and naturally watertight. Splices have fag ends clipped short and moving ends bound under. The specimen is decorated with a series of six "geometricized" quadrupedal animal figures. There are two figures on each of the long margins of the basket and one on each "end." In plan, all of the figures are quite similar, with elongate torsos, compressed necks, blocked heads, stubby "erect" tails and short legs (Fig. 137, 138). Spacing is more or less uniform, but the exact dimensions of the figures vary slightly. All of the figures are oriented with their heads to the viewer's right. The designs originally were inserted into the basket wall using the technique described above for fragments of this type. On the outer surface of the basket, however, the designs also were painted over in three colors: black, aqua and red. Bodies and heads always are red and are outlined on the dorsal surface in the opposite color. Each figure has two aqua and two black legs. Although the dorsal and ventral outlines always are a different color in the same figure, the sequence of colors is not consistent around the basket. The aqua-backed forms are found on each short wall or end of the basket,

Figure 136. Type XVII complete hour-glass tray; note flattened continuous coil center and 2/2 false termination of self rim; work surface.



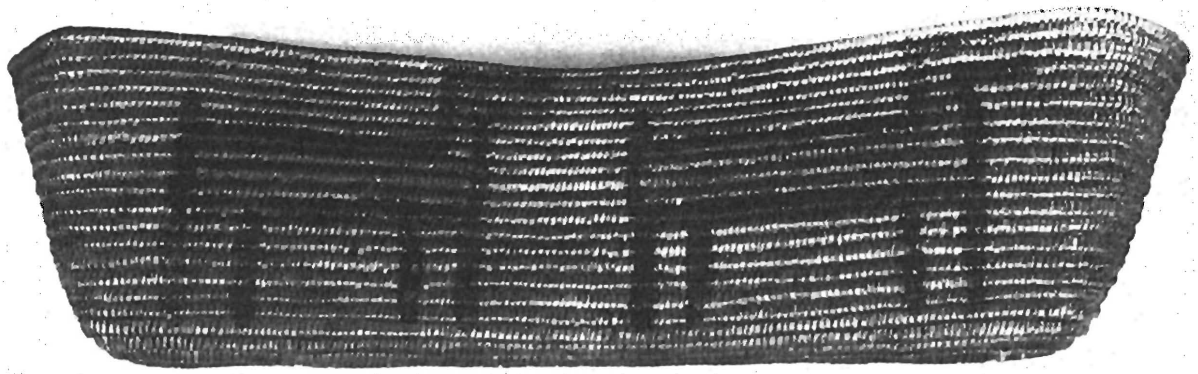


Figure 137. Type XVII complete hour-glass tray; note "geometricized" quadrupeds; non-work surface.

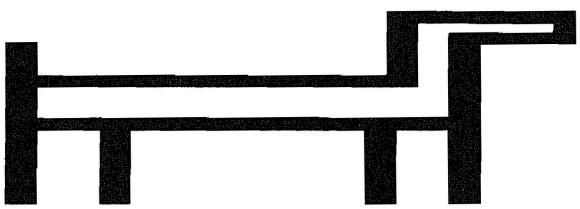


Figure 138. "Geometricized" quadruped design from complete hour-glass tray.

Figure 139. Type XVIII wall fragment; five rod bunched foundation, non-interlocking stitch; work surface undetectable.

while each long wall has both a black and an aqua-backed form. Whatever the color of the dorsal or ventral outline, each figure has the same sequence of leg colors. When viewed from the right, the first and third legs are aqua and the second and fourth legs are black. Though the designs are badly faded on the interior and moderately faded on the exterior, this container exhibits no use wear on any surface. The contents of this unique basket (see Chapter 19) strongly suggest that it was produced for some non-utilitarian function.

Measurements (all specimens): Range in diameter of coils, 4–13 mm; mean diameter of coils, 6.6 mm; range in width of stitches, 0.5–3.75 mm; mean width of stitches, 1.75 mm; range in gap between stitches, 0–2.4 mm; mean gap between stitches, 1.75 mm; range in coils per centimeter, 1–3; mean coils per centimeter, 1.8; range in stitches per centimeter, 3–10; mean stitches per centimeter, 5.05.

Measurements (complete specimens): Container 1—maximum diameter of rim, 205 mm; maximum diameter of base, 190 mm; maximum depth, 160 mm. Container 2—maximum length (center of excurvate rim to center of bifurcated base), 340 mm; maximum width of rim, 300 cm; minimum width of rim, 190 mm; maximum width of base, 220 mm; minimum width of base, 50 mm. Container 3—maximum length, 380.5 mm; maximum width, 200 mm; minimum width, 80 mm; maximum depth, 855 mm.

Type XVIII: Close Coiling, Five-Rod Bunched Foundation, Non-Interlocking Stitch (Fig. 139)
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Unknown.
Work direction: Right to left.

Technique and Comments: A bundle of five whole rods with cortex is sewn with non-inter-

locking stitches, which wrap rather than pierce the bundle. Work surface is not detectable. The specimen is rigid, undecorated, unmended, unpitched and not naturally watertight. Because the specimen is disintegrating, splice type and wear patterns are not discernible.

Measurements: Diameter of coils, 8 mm; width of stitches, 3 mm; gap between stitches, 0; coils per centimeter, 1.5; stitches per centimeter, 1.5.

Type XIX: Open Coiling, One-Rod Foundation, Intricate Stitch
Number of specimens: 1.
Type of specimen: Wall fragment.
Form represented: Unknown.
Work direction: Right to left.

Technique and Comments. This highly fragmentary specimen is the only piece of open coiling recovered from Antelope House. A single whole decorticated rod is sewn with intricate interlocking stitches, which wrap rather than pierce the rod. This stitch variety is identical in all particulars to that figured and described by Morris and Burgh (1941: 17, Fig. 30 a,b) as Spaced Coiling, 1. Work surface is not detectable. The specimen is rigid, undecorated and unmended.

Measurements: Diameter of coils, 3 mm; width of stitches, 2 mm; coils per centimeter, 1; stitches per centimeter, 5.

Plaiting

The 466 pieces of plaited basketry recovered from Antelope House are assigned to four structural types, which are described below by numerical prefix. The descriptive format for this subclass is modified, in that all specimens without selvage are discussed first, followed by specimens with selvage. Specimens with selvage are described and/or discussed by form class (e.g. ring baskets, matting, pot rests, etc.) and by selvage type. Table 138 presents the distribution of plaited basketry by type, raw materials, period and provenience.

Type XX (without selvage): Simple Plaiting, 1/1 Interval
Number of specimens: 2.
Type of specimens: Fragments.
Forms represented: Matting, 1; bag, 1.

Technique and Comments: Single elements pass over each other in a 1/1 interval. No shifts are present. Both specimens are undecorated, unmended, unpitched and not watertight. Both sides of the matting fragment exhibit light to moderate wear.

Measurements: Range in diameter of plaiting elements, 4–13 mm; mean diameter of plaiting elements, 6.25 mm; angle of crossing of plaiting elements, 90°.

Type XXI (without selvage): Twill Plaiting, 2/2 Interval (Fig. 140)
Number of specimens: 98.
Type of specimens: Fragments.
Number of artifacts represented: 60 (minimum).
Forms represented: Matting, 69; ring baskets, 24; pot rests, 2; rigid containers, 2; bag, 1.

Technique and Comments: Single elements pass over each other in a 2/2 interval. Shifts are present in three of the matting fragments and 12 of the ring basket fragments. In some cases, notably ring basket centers, several different shifts are present in the same specimen and clearly constitute portions of geometric decorative patterns. Matting shifts include two examples of 2/6/2 intervals and one each of 2/3/2, 2/3/1/3/2, 2/3/4/2 and 2/3/1/2 intervals. Ring basket shifts include nine examples of 2/1/2 intervals, six of 2/3/2 intervals and one each of 2/1/1/1/1/2 and 2/3/3/2 intervals. Recognizable designs in the ring basket fragments include eight "plain meanders" (see Morris and Burgh 1942: Fig. 10, f, g, i, j), one of which employs alternating sets of light and dark elements. The rigid container and pot rest fragments lack shifts of any sort. The bag fragment is a partially finished elongate pouch with several irregular 2/1/2 shifts. The unplaited elements are bound with eight circuits of single-ply, untwisted *Yucca* sp. cordage (diameter 1.9 mm) secured by a double half-hitch and a running bowline. The bag is initiated by plaiting a small, depressed, circular center and folding the elements at a 90° angle away from the center. All specimens of this type (i.e., without selvage) are reinforced with single-ply, unspun fiber sewn in a running stitch. All specimens are unpitched; however, the two rigid container fragments are very tightly woven and are naturally watertight. Fifty-six of the mat fragments exhibit moderate to heavy

Table 138. Distribution of plaited basketry by type, raw material, period and provenience—Continued

Key

The first Roman numeral indicates plaiting type; the set of letters designates raw materials; the Arabic numeral represents number of specimens.

S = *Scirpus* sp.
Sa = *Salix* sp.
T = *Typha* sp.
Ya = *Yucca angustissima*
Yb = *Yucca baccata*
Z = *Zea mays*

	South Area								
	South Area	*South Plaza*	*South Plaza Floor 1*	*South Plaza Burial 5*	*Kiva D*	*Stair 69*	*Room 72*	*Room 77*	*Room 82*
BMIII		XXI-Ya-1							
PI		XX-S-1 XXI-S-1	XXI-Ya-1		XXI-Ya-1 XXI-S-1	XXI-S-1 XXII-Ya-1	XX-Yb-1 XX-S-1	XXI-Ya-1	
PII		XX-Ya-1 XXI-S-5 XXI-Ya-2 XXI-Yb-1 XXII-Ya-1			XXI-Ya-1				XXI-S-2
EPIII		XX-Ya-1 XXI-Ya-1 XXII-S-1						XXI-S-1	
MPIII		XX-Ya-3 XX-Yb-1 XXI-S-5 XXI-Ya-2	XXI-S-8 XXI-Ya-2 XXI-Yb-4	XXI-S-1 XXI-Ya-1 XXI-YB-1					
LPIII		XX-Ya-1 XX-Yb-1 XXI-S-1 XXII-S-1							
Navajo									
Historic	XXI-Yb-1								
Unknown		XX-Ya-1 XXI-S-3 XXI-Yb-1 XXII-Ya-1 XXII-S-1 XXIII-S-1							
TOTALS	1	39	15	3	3	2	2	2	2

	South Room Block								
Room 84	*South Room Block*	*Tower Corridor*	*Tower Corridor Floor 1*	*Tower Corridor Floor 2*	*Tower Corridor Floor 3*	*Tower Corridor Floor 4*	*Room 1*	*Room 1 Floor 1*	*Room 1 Floor 2*
XXI-S-1		XXI-S-2				XX-Yb-1	XXI-S-3		
		XX-Yb-2 XXI-Ya-1				XXI-S-2	XXI-Ya-1 XXI-S-3		
		XX-Yb-1 XXI-S-13 XXI-Yb-1	XXI-S-2	XXI-S-1	XX-Yb-1 XXI-S-1 XXI-Ya-1	XXI-S-2	XX-S-2 XX-Ya-2 XX-Yb-1 XXI-S-31 XXI-Ya-2 XXI-Yb-3	XXI-S-1	XXI-S-1
	XX-Yb-1	XXI-Ya-1 XXI-S-2							
1	1	23	2	1	3	5	48	1	1

continued

Table 138. Distribution of plaited basketry by type, raw material, period and provenience—Continued

Key

The first Roman numeral indicates plaiting type; the set of letters designates raw materials; the Arabic numeral represents number of specimens.

S = *Scirpus* sp.
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T = *Typha* sp.
Ya = *Yucca angustissima*
Yb = *Yucca baccata*
Z = *Zea mays*

	Room 2	*Room 9*	*Room 9 Floor 1*	*Room 21*	*Room 21 Floor 2*	*Room 21 Floor 3*	*Room 22*	*Room 22 Floor 1*	*Room 22 Floor 2*	*Room 23*
BMIII										
PI				XXI-S-3 XXI-Ya-4						
PII	XX-Yb-1			XXII-S-1 XXII-Yb-1	XXII-S-2					
EPIII				XX-Sa-1 XXI-S-8 XXI-Ya-8 XXI-Yb-2		XXI-Ya-1	XX-Yb-1 XXI-S-1 XXI-Ya-2	XX-Yb-1	XX-Ya-1	
MPIII	XXI-S-1 XXI-Ya-1 XXII-S-1	XXI-Ya-1	XXI-S-2	XXII-S-1 XXI-S-2 XXII-S-1 XXII-YaYb-1	XXI-S-11 XXI-Ya-2 XXI-T-3 XXII-S-1 XXII-Yb-1					XXI-S-2 XXI-Ya-1
LPIII							XXI-S-1			XXII-Ya-1
Navajo										
Historic	XXI-S-4									
Unknown										
TOTALS	8	1	2	33	20	1	5	1	1	4

								Central Room Block	
Room 29	*Room 29 Floor 2*	*Room 29 Floor 3*	*Room 29 Floor 5*	*Room 30*	*Room 30 Floor 1*	*Room 30 Cache Pit 32b*	*Kiva B*	*Kiva B Floor 1*	*Kiva B Annex*
XXI-S-1									
XX-Ya-1 XXI-S-1 XXII-S-2									
XX-Ya-2 XXI-S-3 XXI-Yb-1 XXII-Ya-1			XXI-S-1				XX-Yb-1		
XXI-S-5 XXI-Yb-1 XXI-Ya-2	XX-Ya-2 XXI-S-1 XXI-Ya-3			XX-Z-1 XX-Ya-1 XXII-S-1		XXI-Ya-1			
XXI-S-8 XXI-Ya-9 XXI-Yb-1 XXII-S-1	XXI-S-9 XXI-Ya-2	XXI-S-3 XXI-Ya-5 XXII-S-3		XXI-S-2	XX-Ya-4 XXI-S-2 XXI-Ya-4 XXII-S-1 XXII-Yb-1		XX-Ya-1 XX-Yb-3 XXI-S-7 XXI-Ya-1 XXI-Yb-2	XXI-S-1	XX-Ya-1 XXI-S-5 XXI-Ya-2
									XXI-Ya-1
							XX-Ya-1		XX-Ya-1 XXI-Yb-1
39	17	11	1	5	12	1	16	1	11

continued

Table 138. Distribution of plaited basketry by type, raw material, period and provenience—Continued

Key

The first Roman numeral indicates plaiting type; the set of letters designates raw materials; the Arabic numeral represents number of specimens.

S = *Scirpus* sp.
Sa = *Salix* sp.
T = *Typha* sp.
Ya = *Yucca angustissima*
Yb = *Yucca baccata*
Z = *Zea mays*

Kiva B Annex Floor 1	*Kiva C*	*Room 27*	*Room 36 Floor 1*	*Room 36 Floor 5*	*Room 40*	*Room 40 Floor 1*	*Room 42*	*Room 43*	*Room 44*
BMIII									
PI									
PII									
EPIII									
MPIII									
XXI-S-1	XXI-S-1 XXII-Ya-1	XX-Ya-1 XX-Yb-1 XXI-S-1 XXI-Ya-1	XXI-S-1	XXI-S-3	XX-Yb-2 XXI-S-5 XXI-Ya-2	XX-Ya-1 XXI-S-2	XXI-Ya-1 XXI-S-2	XX-Yb-2 XXI-S-1	XXI-S-3 XXI-Ya-2 XXII-S-2
LPIII									
Navajo									
Historic									
		XXI-S-1						XXI-S-1	XXI-S-1
Unknown									
1	2	5	1	3	9	3	3	4	8

TOTALS

Room 48	*Room 52*	*Room 53*	*Room 54*	*Room 54 Floor 1*	*Structure 81*	*North Room Block North Room Block*	*Room 5*	*Room 6*	*Room 7*
							XX-Yb-1		
							XXI-S-3 XXI-Ya-1		XXI-Ya-1
							XXI-S-1		
								XXI-S-2	
XXI-S-4 XXII-S-2	XXI-S-1	XXI-S-1		XX-Ya-1 XXI-S-1	XXI-S-1		XXI-S-2 XXI-Ya-1		XXI-S-1
XXI-Yb-1			XXI-S-1			XX-Ya-1	XXI-Yb-1 XXI-S-1 XXI-Ya-1	XXI-S-1	
7	1	1	1	2	1	1	12	3	2

continued

Table 138. Distribution of plaited basketry by type, raw material, period and provenience—Continued

Key

The first Roman numeral indicates plaiting type; the set of letters designates raw materials; the Arabic numeral represents number of specimens.

S = *Scirpus* sp.
Sa = *Salix* sp.
T = *Typha* sp.
Ya = *Yucca angustissima*
Yb = *Yucca baccata*
Z = *Zea mays*

	Room 16	*Room 18*	*Room 18 Floor 2*	*Room 19*	*Room 31*	*Room 35 Floor 1*	*Room 38 Floor 2*	*Room 41*	*Room 41 Floor 2*	*Room 46*	*Room 46 Burial 8*
BMIII				XXI-S-1							
PI											
PII											
EPIII											
MPIII		XXI-S-3 XXI-Ya-1		XXI-Yb-1	XXI-S-3		XXI-S-1	XXI-S-1 XXI-Yb-1	XXI-S-1 XXI-Ya-1	XXI-S-2 XXI-Ya-1	XXI-S-1
LPIII				XXI-S-1 XXI-Ya-1							
Navajo											
Historic	XXI-S-2	XXI-Yb-1	XXI-S-1			XX-Yb-1					
Unknown											
TOTALS	2	5	1	4	3	1	1	2	2	3	1

Room 47	*Room 47 Floor 1*	*Room 49 Floor 1*	*Room 51*	*Room 51 Floor 2*	*North Terrace*	*North Area*	Totals
							2
							7
							22
							34
							60
XXI-S-6 XXI-Ya-2 XXI-Yb-1	XXI-Ya-1	XXI-S-1	XXI-S-1		XX-Ya-2 XXI-S-5 XXII-Ya-1	XX-Yb-1 XXI-S-1	293
							8
							2
				XXI-S-1	XXI-S-1 XXIII-Ya-1	XXI-S-1	
							38
9	1	1	1	1	10	3	466

Figure 140. Type XXI (without selvage) unfinished bag; twill plaiting, 2/2 interval.

wear on both surfaces; two are worn on one surface only. Nine specimens, well worn on both sides, are also charred. One specimen has a dense, reddish, waxy substance of unknown composition adhering to one surface. Another, apparently a portion of a burial mat, has a segment of balanced plain weave cloth (single-ply Z-spun *Yucca* sp. warps and wefts; 10 warps and wefts per centimeter) adhering to one surface, along with bits of human hair and skin. Twelve of the ring basket fragments exhibit moderate to heavy wear on both surfaces; four are worn on one surface only. The 12 specimens worn on both surfaces also are charred. One ring basket specimen has a granny knot made of single-ply, untwisted *Scirpus* sp. fiber affixed to one edge. "Foreign" matter adhering to the surface of one or more ring basket fragments includes human coprolites, hair, seeds, feathers and insect exoskeletons. One fragment is markedly curved, with two circular depressions, the purpose of which is unknown. One pot rest fragment is badly fragmented through heavy wear and one rigid container fragment exhibits light wear on one side only. The bag fragment has no wear patterns.

Measurements (matting):Range in diameter of plaiting elements, 3.3–12.8 mm; mean diameter of plaiting elements, 5.89 mm; range in angle of crossing of plaiting elements, 80°–100°; mean angle of crossing of plaiting elements, 90°.

Measurements (ring baskets): Range in diameter of plaiting elements, 2–7.8 mm; mean diameter of plaiting elements, 4.21 mm; range in angle of crossing of plaiting elements, 80°–100°; mean angle of crossing of plaiting elements, 90°.

Measurements (pot rests):Range in diameter of plaiting elements, 3–6.33 mm; mean diameter of plaiting elements, 4.38 mm; mean angle of crossing of plaiting elements, 90°.

Measurements (rigid containers): Range in diameter of plaiting elements, 3.4–6.1 mm; mean diameter of plaiting elements, 4.77 mm; mean angle of crossing of plaiting elements, 90°.

Measurements (bag): Range in diameter of plaiting elements, 3–7 mm; mean diameter of plaiting elements, 5 mm; mean angle of crossing of plaiting elements, 70°.

Type XXII (without selvage): Twill Plaiting, 3/3 Interval

Number of specimens: 12.
Type of specimens: Fragments.
Number of artifacts represented: 9 (minimum).
Forms represented: Matting, 9; ring baskets, 3.

Technique and Comments: Single and, in one case, double elements pass over each other in a 3/3 interval. In the specimen with paired elements, only two of the extant sets are doubled.

Interestingly, in both sets, the doubled elements are two different species of *Yucca*. A single 3/4/5/3 shift is present in one matting fragment, while a ring basket center has a plain concentric diamond pattern (cf. Morris and Burgh 1942: Fig. 10c) produced by alternating the standard 3/3 interval with 3/4/5/3, 3/5/4/3, 3/8/3 and 3/2/1/3/5/3 shifts. All specimens are unmended, unpitched and not naturally watertight. All of the matting fragments exhibit moderate to heavy wear on both surfaces; two are charred and one is stained on one surface. Two of the ring basket fragments are heavily worn on both surfaces and one of them is charred. Foreign matter adhering to the surface of one or more matting or ring basket fragments includes human coprolites, seeds, feathers and insect exoskeletons.

Measurements (matting): Range in diameter of plaiting elements, 2.5–7.1 mm; mean diameter of plaiting elements, 4.55 mm; mean angle of crossing of plaiting elements, 90°.

Measurements (ring baskets): Range in diameter of plaiting elements, 3–6 mm; mean diameter of plaiting elements, 4.5 mm; range in angle of crossing of plaiting elements, 90°–115°; mean angle of crossing of plaiting elements, 101.66°.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval
Form: Matting.
Number of specimens: 11.
Type of specimens: Fragments.
Number of individual mats represented: 8 (minimum).

Technique and Comments: Single and, in one case, double elements pass over each other in a 1/1 interval. Shifts include one example each of 2/1/2 and 2/1/1/2 intervals. The selvage treatment has terminal elements folded back at a 90° angle and replaited into the body of the mat. All specimens are undecorated, unpitched and not naturally watertight. One specimen is mended or reinforced with a strip of untwisted *Yucca baccata*, which has been irregularly sewn in a running stitch across the fragment. Six specimens exhibit moderate to heavy wear on both surfaces; one specimen has moderate wear on one surface only. Two specimens are stained on both surfaces and two with wear on both sides also are charred.

Measurements: Range in diameter of plaiting elements, 3–15 mm; mean diameter of plaiting elements, 8.34 mm; angle of crossing of plaiting elements, 87°.

Type XX (90° self selvage): Single Plaiting, 1/1 Interval
Form: Four-element plaited band.
Number of specimens: 20.
Type of specimen: Fragments.
Number of individual bands represented: 20.

Technique and Comments: These and all other plaited bands share the same basic configuration. They are elongate, rectangular items resembling belts in general appearance. "Ends," where present, are squarish with slightly rounded corners. Construction may be initiated either in the center or at one end. The basic manufacturing process is identical to braiding in cordage production, with one notable and singular exception: braided cordage is basically three dimensional, while plaited bands are two dimensional, or flat. The basic selvage technique is the same in all variants of plaited bands. Terminal elements are folded back at a 90° angle and replaited into the body of the band. In some cases, 180° terminal element manipulations are employed at the corners to insure a symmetrical appearance. In this variant, four single, and, in one case, double elements pass over each other in a 1/1 interval. No shifts are present. All specimens are undecorated, unmended, unpitched and not naturally watertight. Eleven specimens exhibit moderate to heavy wear on both surfaces. Of these, three also are charred. One is heavily stained on both surfaces, but otherwise unworn.

Measurements: Range in diameter of plaiting elements, 1–7 mm; mean diameter of plaiting elements, 3.91 mm; range in angle of crossing of plaiting elements, 50°–100°; mean angle of crossing of plaiting elements, 82.10°; range in length, 21–130 mm; mean length, 57.92 mm; range in width, 6–22.5 mm; mean width, 10.30 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 141)
Form: Five-element plaited band.
Number of specimens: 2.
Type of specimens: Fragments.
Number of individual bands represented: 2.

Figure 141. Type XX (90° self selvage) five-element plaited band fragment; simple plaiting, 1/1 interval.

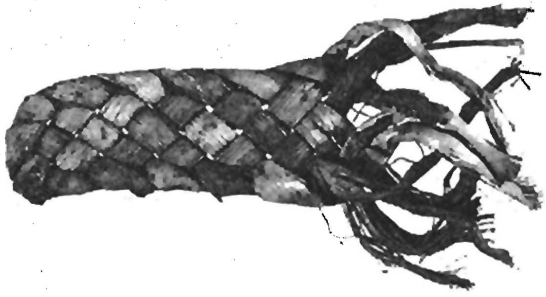


Figure 142. Type XX six-element plaited band fragment.

Figure 143. Type XX eight-element plaited band fragment; note simple overhand knot on loose plaiting elements.

Technique and Comments: Five single elements pass over each other in a 1/1 interval. No shifts are present. Both specimens are undecorated, unmended, unpitched and not naturally watertight. One specimen exhibits moderate wear on both surfaces; the other is stained and charred on one end.

Measurements: Range in diameter of plaiting elements, 2–2.5 mm; mean diameter of plaiting elements, 2.25 mm; range in angle of crossing of plaiting elements, 45°–90°; range in length, 37–80 mm; mean length, 58.5 mm; mean width, 10.4 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 142)
Form: Six-element plaited band.
Number of specimens: 5.
Type of specimens: Fragments.
Number of individual bands represented: 5.

Technique and Comments: Six single elements pass over each other in a 1/1 interval. No shifts are present. All specimens exhibit moderate attrition wear on both surfaces. One specimen is charred on one end and another has a white feather (genus/species unknown) affixed to its surface.

Measurements: Range in diameter of plaiting elements, 2–14 mm; mean diameter of plaiting elements, 5.55 mm; range in angle of crossing of plaiting elements, 80°–90°; mean angle of crossing of plaiting elements, 88°; range in length, 40–194 mm; mean length, 86.8 mm; range in width, 10.7–33.5 mm; mean width, 20.04 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 143)
Form: Eight-element plaited band.
Number of specimens: 11.
Type of specimens: Fragments.
Number of individual bands represented: 10.

Technique and Comments: Eight single elements pass over each other in a 1/1 interval. Shifts include one example each of 1/2/1 and 1/2/2/1 intervals. All specimens are undecorated, unmended, unpitched and not naturally watertight. Five specimens exhibit moderate to heavy attrition wear on both surfaces. Of these, four are charred on one end. Three other specimens are stained on one or both surfaces and one spec-

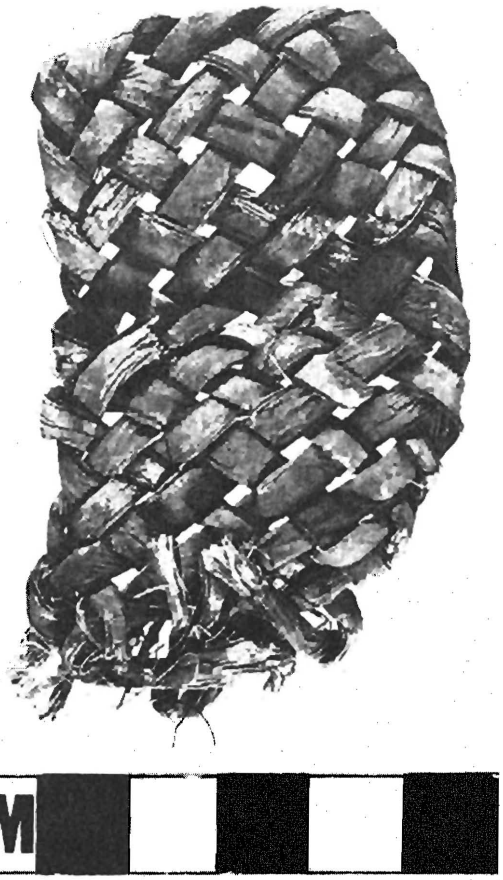


Figure 144. Type XX 10-element plaited band fragment.

Figure 145. Type XX 14-element plaited band fragment.

Figure 146. Type XX 18-element plaited band.

imen has feathers (genus/species unknown) adhering to one surface.

Measurements: Range in diameter of plaiting elements, 2–6.8 mm; mean diameter of plaiting elements, 3.51 mm; mean angle of crossing of plaiting elements, 90°; range in length, 32–153 mm; mean length, 82.18 mm; range in width, 10.7–25.5 mm; mean width, 20 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 144)
Form: Ten-element plaited band.
Number of specimens: 5.
Type of specimens: Fragments.
Number of individual bands represented: 5.

Technique and Comments: Ten single elements pass over each other in a 1/1 interval. No shifts are present. All specimens are undecorated, unmended, unpitched and not naturally watertight. Four specimens exhibit moderate to heavy wear on both surfaces. Of these, one is charred.

Measurements: Range in diameter of plaiting elements, 2.2–6 mm; mean diameter of plaiting elements, 3.9 mm; range in angle of crossing of plaiting elements, 80°–100°; mean angle of crossing of plaiting elements, 92°; range in length, 43–238 mm; mean length, 163.2 mm; range in width, 20–43 mm; mean width, 34.24 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 145)
Form: Fourteen-element plaited band.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Fourteen single elements pass over each other in a 1/1 interval. No shifts are present. The specimen is undecorated, unmended, unpitched and not naturally watertight. Heavy wear is present on both surfaces.

Measurements: Range in diameter of plaiting elements, 3.7–7 mm; mean diameter of plaiting elements, 5.35 mm; mean angle of crossing of plaiting elements, 90°; length, 73 mm; width, 60.8 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 146)
Form: Eighteen-element plaited band.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Eighteen single elements pass over each other in a 1/1 interval. No shifts are present. The specimen is undecorated, unmended, unpitched and not naturally watertight. Heavy attrition wear is present on both surfaces and one side is deeply stained.

Measurements: Mean diameter of plaiting elements, 2.7 mm; mean angle of crossing of plaiting elements, 90°; length, 45 mm; width, 43 mm.

Type XX (90° self selvage): Simple Plaiting, 1/1 Interval (Fig. 147)
Form: Plaited tube.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: This unique specimen is basically an open-ended tube, or cylinder, produced by continuous radial plaiting of 12 single elements in a 1/1 interval. No shifts are present. The end with selvage is notched and has terminal elements folded at a 90° angle and replaited into the body of the tube. The other end of the tube is unfinished. The specimen is undecorated, unmended, unpitched and not naturally watertight. No wear patterns are present.

Measurements: Mean diameter of plaiting elements, 4.9 mm; mean angle of crossing of plaiting elements, 79°; length, 85 mm; maximum interior diameter, 10 mm.

Type XX (180° self selvage): Simple Plaiting, 1/1 Interval
Form: Matting.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Single elements pass over each other in a 1/1 interval. There are no shifts. The selvage treatment has terminal elements folded back at a 180° angle and replaited into the body of the mat. The specimen is undecorated, unmended, unpitched and not naturally watertight. "Wear" patterns are limited to several dark stains on both surfaces.

Measurements: Mean diameter of plaiting elements, 4.75 mm; mean angle of crossing of plaiting elements, 90°.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval (Fig. 148, 149)
Form: Matting.
Number of specimens: 24.
Type of specimens: Fragments.
Number of individual mats represented: 20 (minimum)

Technique and Comments: Single and, in two cases, double elements pass over each other in a 2/2 interval. No shifts are present. Selvage treatment has terminal elements folded back at a 90° angle and replaited into the body of the mat. In one specimen, alternate elements are folded to opposite surfaces of the mat, producing a double edge. All specimens are undecorated, unmended, unpitched and not naturally watertight. Eleven specimens exhibit moderate to heavy wear on both surfaces; five specimens have moderate to heavy wear on one surface only. Four specimens with wear also are heavily stained and five are charred. Foreign matter adhering to the surface of one or more specimens includes fibers of *Gossypium* sp., feathers (genus/species unknown) and unidentified plant epidermis.

Measurements: Range in diameter of plaiting elements, 1.8–9.2 mm; mean diameter of plaiting elements, 5.3 mm; range in angle of crossing of plaiting elements, 80°–110°; mean angle of crossing of plaiting elements, 91.79°.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Petate.
Number of specimens: 2.
Type of specimens: Fragments.
Number of individual petates represented: 2.

Figure 147. Type XX plaited tube fragment.

Figure 148. Type XXI (90° self selvage) matting fragments; twill plaiting, 2/2 interval.

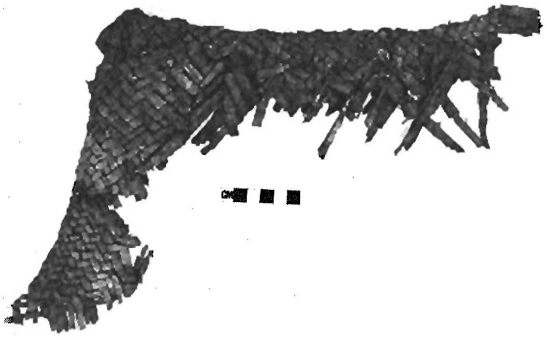


Figure 149. Type XXI (90° self selvage) matting fragment; note 90° selvage on one margin.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No shifts are present. The basic selvage treatment has terminal elements folded back at a 90° angle and replaited into the body of the petate. One hundred and eight degree folds are employed at the corners to insure symmetry. Both specimens are reinforced about 1 to 2 cm below the selvage with a circuit of simple twining. In one specimen, 2-ply unspun S-twist twining engages two plaiting elements at each weft crossing; in the other, 2-ply unspun S-twist twining engages three elements at each weft crossing. Both specimens are undecorated, unmended, unpitched and not naturally watertight. Both specimens exhibit light attrition wear on both surfaces and one is charred.

Measurements: Range in diameter of plaiting elements, 6–10 mm; mean diameter of plaiting elements, 8 mm; mean angle of crossing of plaiting elements, 90°; range in diameter of twining reinforcements, 14–18 mm; mean diameter of twining reinforcements, 1.6 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval (Fig. 150)
Form: Compound plaited baskets.
Number of specimens: 2.
Type of specimens: Complete, 1; fragment, 1.

Technique and Comments: Single elements pass over each other in a 1/1 interval. One specimen has shifts which include examples of 2/3/2, 2/1/3/2, 2/1/1/2 and 2/6/2 intervals. Selvage treatment has terminal elements folded back at a 90° angle and replaited into the body of the basket. Both specimens are more or less circular, flat-bottomed trays with gently sloping walls. The bottoms and walls are produced separately and are joined with a circuit of simple 2-ply unspun S-twist twining that engages two plaiting elements at each weft crossing. The ends of the weft rows are spliced with overhand knots. Both specimens are undecorated, unmended, unpitched and not

Figure 150. Type XXI (90° self selvage) complete compound plaited basket; note method of attachment of walls and base.

naturally watertight. The complete specimen exhibits moderate to heavy attrition wear on the convex (outer) surface and light attrition wear on the concave (inner) surface. The fragmentary specimen has *Gossypium* sp. fibers adhering to the inner surface and feathers (genus/species unknown) adhering to the outer surface.

Measurements (both specimens): Range in diameter of plaiting elements, 3.5–4 mm; mean diameter of plaiting elements, 3.75 mm; mean angle of crossing of plaiting elements, 90°; mean diameter of twining weft rows, 2 mm.

Measurements (complete specimen): Maximum diameter of rim, 85 mm; maximum diameter of base, 65 mm; maximum depth, 16 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Miniature plaited basket.
Number of specimens: 1.
Type of specimen: Complete.

Technique and Comments: Single elements pass over each other in a 1/1 interval. No shifts are present. Selvage treatment has terminal elements folded at a 90° angle and replaited into the body of the basket. The specimen is oval in plan, with a rounded base and flaring walls. The specimen is rigid, undecorated, unmended, unpitched and not naturally watertight. The interior and exterior surfaces are heavily charred. "*Gossypium* sp.-like" fibers adhere to the exterior surface.

Measurements: Mean diameter of plaiting elements, 3 mm; mean angle of crossing of plaiting elements, 70°; maximum diameter of rim, 33 mm; maximum depth, 17 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
(Fig. 151 through 154)

Technique and Comments: This form group includes flexible and semi-flexible containers of two basic configurations: the globular bag, or pouch, and the elongate, or tubular, bag. Globular bags are represented by one complete and 13 fragmentary specimens; there is a single tubular bag. In all specimens of this form group, single elements pass over each other in a 2/2 interval. Shifts present in the globular bags include examples of 2/1/2, 2/3/2, 2/4/2 and 2/1/3/2 intervals.

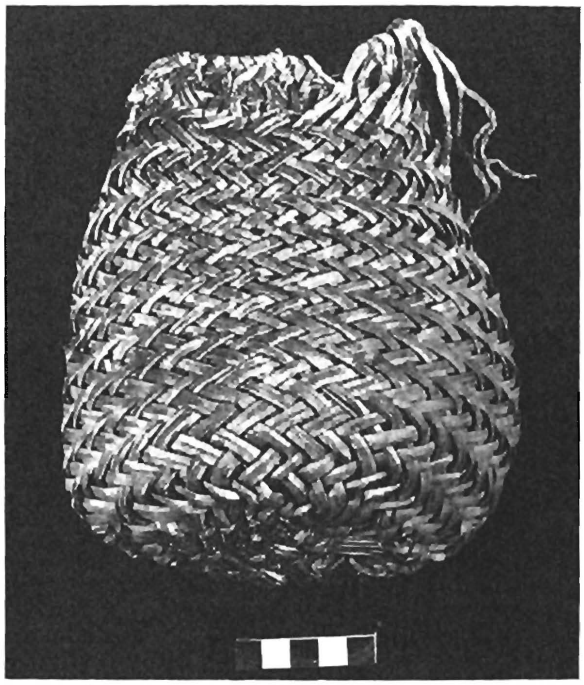


Figure 151. Type XXI (90° self selvage) complete globular bag.

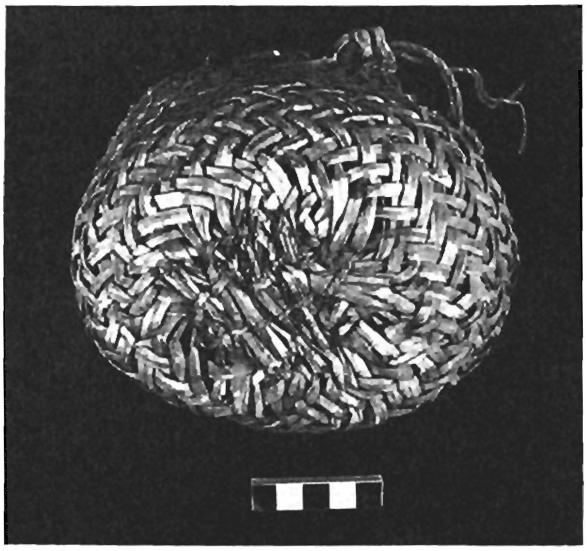


Figure 152. Type XXI (90° self selvage) radial twined center of complete globular bag.

The tubular bag has several 2/3/2 shifts. The complete tubular bag is made of a single whole *Yucca angustissima* plant, the center (or base) consisting of the truncated stalk. The rim selvage has terminal elements folded back at a 90° angle and replaited into the body of the bag. Near the base of the bag, the elements are, of necessity, un-

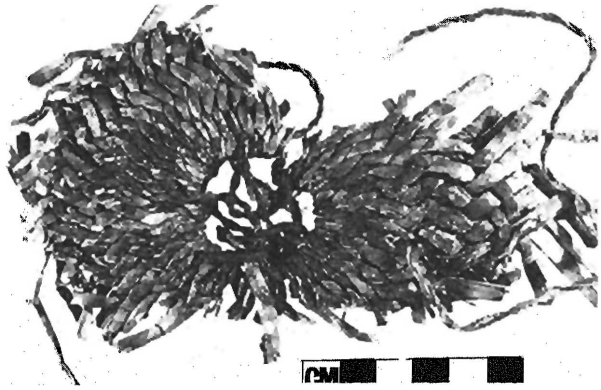


Figure 153. Type XXI (90° self selvage) globular bag fragment; note cordage reinforcement at mouth and reinforced shoulders.

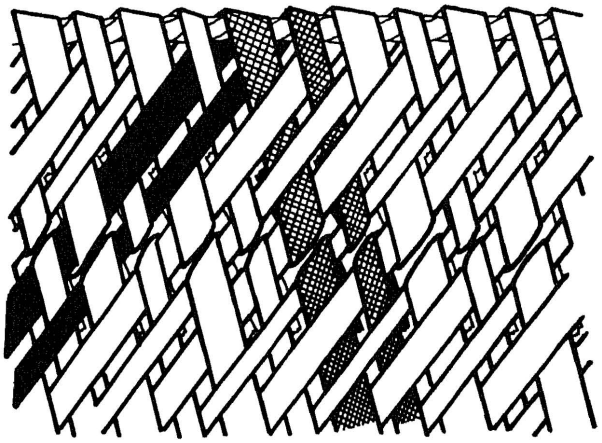


Figure 154. Schematic of selvage and reinforced shoulder of Type XXI (90° self selvage) globular bag.

plaited and have been reinforced or bound with a single course of simple 2-ply unspun S-twist twining (diameter of wefts, 1.25 mm), which engages two elements at each weft crossing. There is no provision for closing this container. The complete globular bag is initiated via radial twining on crossed warps, which become plaiting elements after several weft courses. Wefts are 2-ply Z-spun S-twist cordage (diameter, 1.9–2.75 mm). Four elements are engaged at each weft crossing with a nearly 1 cm gap between weft rows. The twining is terminated with an overhand knot. The rim selvage has terminal elements folded back at a 90° angle and replaited into the body of the bag with no further modification. There are no provisions for closure. Two specimens have reinforced 90° self selvages. In one case, a single circuit of simple 2-ply unspun S-twist twining (mean diameter of wefts, 2.40 mm) is inserted about 1.83 cm below the rim. The twining engages two elements at each weft crossing and is terminated with an overhand knot. Lengths of *Yucca angustissima* cordage have been inserted on opposite sides of this container some 9.35 mm below the rim. One of these cords is 2-ply S-spun Z-twist (diameter, 2.3–3.3 mm), while the other is 2-ply Z-twist (diameter, 2–4 mm) with one two-element Z-spun S-twist ply and one Z-spun ply. These elements are interlaced to form a half-hitch, which closes the container. In the other reinforced specimen, a two-element running stitch (diameter, 2.2–3.8 mm) is added about 3.9 mm below the rim. There are no provisions for closure. The three remaining selvages are unusual variants of the 90° self type: terminal elements are folded at a 90° angle and replaited into the body of the bag. Within the apex of the 90° folds, a length of cordage is inserted which circumscribes the rim. In two cases, the cordage is 2-ply Z-spun S-twist (mean diameter, 2.8 mm); in one case, the cordage is 2-ply Z-twist (diameter, 2.9 mm) with one two-element Z-spun S-twist ply and one Z-spun ply. On the shoulder of these bags, about 2.5 cm below the rim, a series of elements is inserted from the inside of the bag and plaited *over* the wall elements on the outside of the bag for one complete 2/2 interval. These floated elements are plaited in the same basic 2/2 interval as the remainder of the bag. Their function is problematical. They may represent a simple reinforcement for the potentially heavily used shoulders of the bag and/or they may constitute a means of stabilizing the mouth of the bag to prevent distortion. Whatever their function, the added rigidity of these floated elements insures that the cordage inserts on the rim selvage cannot be used to close the containers; closure is effected by lacing additional cordage across the mouths of the bags. In one case, a length of 2-ply Z-twist cordage (diameter, 2.9 mm) is inserted into the rim and laced sequentially across the mouth to two other loci on the rim. The result is a roughly triangular mesh-like arrangement, which effectively seals the bag, secured with a double square knot. In another case, a length of 2-ply S-spun Z-twist cordage (diameter, 2.8 mm) is laced in a triangular pattern and terminated with a half-hitch.

The cordage closure is absent on the third specimen of this variety. All bags of this type are undecorated, unpitched and not naturally watertight. The tubular bag exhibits light wear on both surfaces and five of the globular bags have moderate to heavy wear on both surfaces. One globular bag has light wear on the outside only. Five globular bags are charred and two are heavily stained.

Measurements (all specimens): Range in diameter of plaiting elements, 2.6–11.5 mm; mean diameter of plaiting elements, 4.48 mm; range in angle of crossing of plaiting elements, 54°–118°; mean angle of crossing of plaiting elements, 81.26°.

Measurements (complete globular bag): Maximum diameter of mouth, 100 mm, maximum diameter of base, 150 mm; maximum length (depth), 190 mm.

Measurements (complete tubular bag): Maximum diameter of mouth and base, 75 mm; maximum length (depth), 160 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Six-element plaited band.
Number of specimens: 3.
Type of specimens: Fragments.
Number of individual bands represented: 2.

Technique and Comments: With the exception of interval, plaited bands of this type are identical in basic configuration to Type XX plaited bands. Selvage treatment also is identical. In this variant, six single elements pass over each other in a 2/2 interval. One specimen exhibits a 2/1/1/2 shift. All specimens are undecorated, unmended, unpitched and not naturally watertight.

Measurements: Range in diameter of plaiting elements, 1.5–6.6 mm; mean diameter of plaiting elements, 3.12 mm; range in angle of crossing of plaiting elements, 75°–90°; mean angle of crossing of plaiting elements, 81.66°; range in length, 85–335 mm; mean length, 171.61 mm; range in width, 7.1–13.4 mm; mean width, 10.26 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Eight-element plaited band.
Number of specimens: 3.
Type of specimens: Fragments.
Number of individual bands represented: 3.

Technique and Comments: Eight single elements pass over each other in a 2/2 interval. One specimen exhibits 2/1/2 and 2/4/2 shifts. Another specimen is reinforced on one end with a single course of 2-ply unspun S-twist twining (mean diameter of wefts, about 1.5 mm), which engages two plaiting elements at each weft crossing. The unbraided elements on the other end of this specimen are bound with a granny knot. All specimens are undecorated, unpitched and not naturally watertight.

Measurements: Range in diameter of plaiting elements, 1.7–4 mm; mean diameter of plaiting elements, 2.92 mm; range in angle of crossing of plait-elements, 90°–110°; mean angle of crossing of plaiting elements, 96.66°; range in length, 39–100 mm; mean length, 70 mm; range in width, 11–20 mm; mean width, 17.16 mm.

Type XXI (90° selvage): Twill Plaiting, 2/2 Interval
Form: Ten-element braid.
Number of specimens: 3.
Type of specimens: Fragments.
Number of individual bands represented: 3.

Technique and Comments: Ten single and, in one case, double elements pass over each other in a 1/1 interval. Shifts include one example each of 2/1/1/2 and 2/1/2 intervals. All specimens are undecorated, unmended, unpitched and not naturally watertight. One specimen is stained on both surfaces.

Measurements: Range in diameter of plaiting elements, 2–8 mm; mean diameter of plaiting elements, 5.1 mm; range in angle of crossing of plaiting elements, 90°–100°; mean angle of crossing of plaiting elements, 93; range in length, 55–245 mm; mean length, 149 mm; range in width, 22.5–42.4 mm; mean width, 32.1 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval (Fig. 155)
Form: Twelve-element plaited band.
Number of specimens: 7.
Type of specimens: Fragments.
Number of individual bands represented: 7.

Technique and Comments: Twelve single and, in one case, double elements pass over each other in a 2/2 interval. No shifts are present. One specimen is decorated with simple linear designs

Figure 155. Type XXI (90° self selvage) 12-element plaited band fragment; note alternating light and dark plaiting elements.

produced by alternating light and dark sets of plaiting elements. Another specimen is pitched on one surface with a resinous substance and apparently is watertight. All other specimens are undecorated, unpitched and not naturally watertight. No specimens are mended. Six specimens exhibit moderate to heavy wear on both surfaces. Of these, two are stained and one is charred.

Measurements: Range in diameter of plaiting elements, 0.3–5.8 mm; mean diameter of plaiting elements, 3.28 mm; mean angle of crossing of plaiting elements, 90°; range in length, 35–370 mm; mean length, 109.48 mm; range in width, 17–49.1 mm; mean width, 32.28 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Fouteen-element plaited band.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Fourteen single elements pass over each other in a 2/2 interval. No shifts are present. One end of the specimen is reinforced with a single course of simple 2-ply unspun Z-twist twining (mean diameter of wefts, 1.05 mm), which engages two plaiting elements at each weft crossing. The twining course is terminated with an overhand knot. The unbraided elements at the opposite end of this specimen are bound together with an overhand knot. The specimen is undecorated, unpitched and not naturally watertight. Slight wear is present on one surface.

Measurements: Range in diameter of plaiting elements, 2.3–2.8 mm; mean diameter of plaiting elements, 2.55 mm; range and mean angle of crossing of plaiting elements, 85°; length, 585 mm; width, 288 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Sixteen-element plaited band.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Sixteen single elements pass over each other in a 2/2 interval. No shifts are present. One end of the specimen is unfinished and the unbraided elements are secured by a course of simple 2-ply unspun Z-twist twining (mean diameter of wefts, 1.3 mm) which engages two elements at each weft crossing. The twining course is terminated with an overhand knot. The specimen is undecorated, unmended, unpitched and not naturally watertight. No wear pattern is visible.

Measurements: Mean diameter of plaiting elements, 3.20 mm; mean angle of crossing of plaiting elements, 93°; length, 290 mm; width, 60 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Seventeen-element plaited band.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Seventeen single elements pass over each other in a 2/2 interval. No shifts are present. The selvage on one end is reinforced with a single unspun untwisted element (diameter, 3.90 mm), which is sewn across the breadth of the band in the basic 2/2 production interval. An overhand knot between the two terminal elements of the end selvage and the final element of the side selvage may represent both the method and the point of completion of this specimen. A series of loops (diameter, 5.95–8.50 mm) is present on both edges of the band. These loops were produced by extending alternate plaiting elements beyond the "normal" selvage before replaiting them into the band. The function of these loops is unknown. About 3.8 cm below the end selvage, a length of macerated

Yucca sp. cordage (diameter, 5.90 mm) has been looped around the juncture of two folded elements of the side selvage and twisted twice. The two ends of this element hang free. One end is bound to another length of single-ply unspun *Yucca* sp. cordage with a square knot. This construction may represent part of a burden tie. The specimen is undecorated, unpitched and not naturally watertight. Moderate to heavy wear is present on both surfaces.

Measurements: Range in diameter of plaiting elements, 3.5–8.1 mm; mean diameter of plaiting elements, 5.8 mm; mean angle of crossing of plaiting elements, 89°; length, 51 mm; width, 69.9 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
Form: Eighteen-element plaited band.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Eight single elements pass over each other in a 2/2 interval. No shifts are present. The specimen is undecorated, unmended, unpitched and not naturally watertight. There are no wear patterns.

Measurements: Range in diameter of plaiting elements, 2.5–3 mm; mean diameter of plaiting elements, 2.75 mm; mean angle of crossing of plaiting elements, 90°; length, 250 mm; width, 42 mm.

Type XXI (90° self selvage): Twill Plaiting, 2/2 Interval
(Fig. 156 through 159)
Form: Pot rest.
Number of specimens: 4.
Type of specimens: Complete, 3; fragment, 1.

Technique and Comments: All representatives of this form group are, in effect, continuous plaited bands or cylinders which, per force, have no end selvages. The "walls" are produced via continuous radial plaiting with single elements in a basic 2/2 interval. Shifts include examples of 2/1/2, 2/3/2, 2/4/2 and 2/1/1/2 intervals. The selvage of both margins has terminal elements folded at a 90° angle and tucked into the interior of the pot rest. These tucked ends are intentionally left quite long, so as to provide additional mass, or padding, for the interior of the pot rest.

Figure 156. Type XXI (90° self selvage) "doughnut" form pot rest (plan view); note selvage treatment.

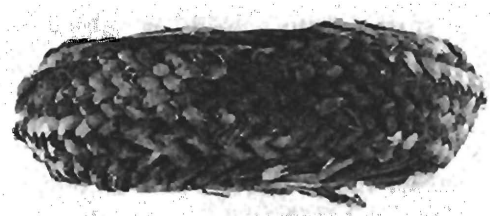
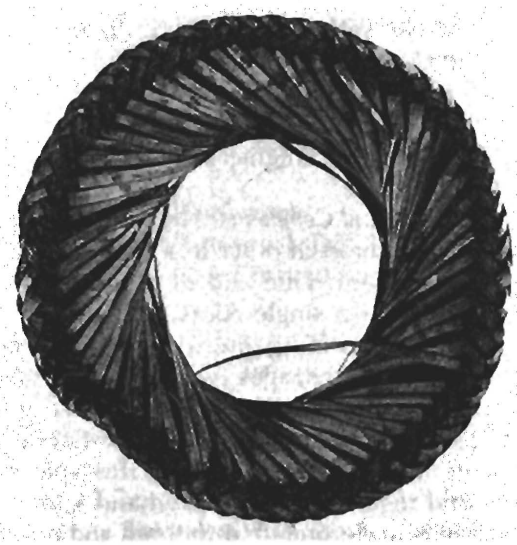


Figure 157. Type XXI (90° self selvage) "doughnut" form pot rest (side view).

Figure 158. Type XXI (90° self selvage) truncated cylinder form pot rest (plan view); note selvage treatment.



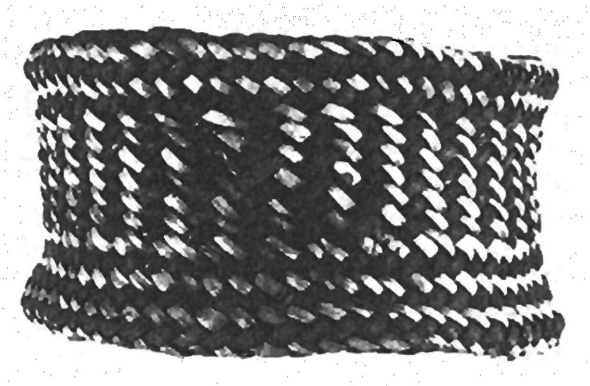


Figure 159. Type XXI (90° self selvage) truncated cylinder form pot rest (side view); note geometric design produced by alternation of dark and light plaiting elements.

Two slightly different configurations are present: a doughnut-like form represented by one specimen and a truncated cylinder represented by three specimens. The doughnut form and one cylindrical form are decorated with simple linear patterns produced by alternating sets of dark and light plaiting elements. All specimens are unmended, unpitched and not naturally watertight. The doughnut form exhibits light wear; two cylindrical forms are heavily worn and crushed or compressed through use. One of these also is charred. The third cylindrical form exhibits slight use sheen, but is otherwise unworn.

Measurements: Range in diameter of plaiting elements, 3–4 mm; mean diameter of plaiting elements, 3.67 mm; range in angle of crossing of plaiting elements, 64°–95°; mean angle of crossing of plaiting elements, 80.8°; range in exterior diameter, 122–155 mm; mean exterior diameter, 132.75; range in interior diameter, 26–65 mm; mean interior diameter, 50.75 mm; range in height (includes two compressed specimens), 14.9–62 mm; mean height (includes two compressed specimens), 32.87 mm.

Type XXI (intricate selvage with twining): Twill Plaiting,
2/2 Interval
Form: Matting.
Number of specimens: 106.
Type of specimens: Complete, 1; fragments, 105.
Number of individual mats represented: 70 (minimum).

Technique and Comments: The most common form of basketry at Antelope House is twill plaited matting with one or another variation of what is here labeled intricate selvage. This selvage type differs from all self selvages in one basic set of interrelated attributes. In 90° and 180° self selvages, the terminal elements are folded only once in the edge construction sequence. Moreover, this first and only fold is sufficient in and of itself to distinguish or delimit the type of the selvage. In all variations of intricate selvage, a minimum of two, and occasionally as many as four, folds are necessary to complete the edge finish. Whatever the variation, the construction of intricate selvages involves the same basic mechanical, or techno-manipulative, steps. The terminal elements are first folded at an obtuse angle, about 130°–150°, to the orientation of the body element of the mat. Thence, after a variable number of plaiting intervals with other similarly folded elements, it is folded again at a 90° angle to the opposite surface of the mat. This second fold is at the apex of the selvage. After the apex fold, the element is again plaited for a variable number of intervals with similarly folded elements and is then clipped off or folded a third time at a 90° angle. If a third fold is employed, the element is clipped off at variable intervals after the fold, or it is folded for a fourth time at a 90° angle and then clipped off. This double 90° fold creates, in effect, a 180° selvage termination. Because of the sheer quantity and considerable diversity of the intricate selvage matting at Antelope House, the analysis of this assemblage focused primarily on the selvage variations and only secondarily on the body plaiting type (2/2 or 3/3). All specimens of 2/2 and 3/3 plaiting with intricate selvages were collectively divided into 36 variants and one residual category based on the manipulation of the terminal element after the apex fold. Following this initial sorting, the variations were lumped into six subtypes based on the number of elements engaged after the apex fold and the manner of finishing or completing the selvage. The six subtypes and their constituent variants are listed in Table 139. The terminal act of classification lumped all subtypes into two broad types based on the presence or absence of a circuit of simple 2-ply twining reinforcements at the first obtuse angle fold. The same procedure was followed with all intricate selvage, 3/3 plaiting. The presence or absence of

Table 139. Distribution of intricate plaiting selvage variants by subtype.

Subtype	*Variant*
I	1, 9, 12, 13, 20, 31, 35
II	2, 3, 4, 5, 6, 7, 15, 16, 18, 19, 21, 22, 24, 26, 28
III	8, 11, 14, 17, 27, 30
IV	10, 25, 32
V	33, 34
VI	23, 29, 36

twining is wholly incidental to the formulation of the 36 original variants or the delimitation of the six subtypes and only serves to taxonomically classify the assemblage at the broadest possible level. The description of all 2/2 plaiting with intricate selvage and twining reinforcement is presented below by subtype or residual category.

Type XXI, Subtype I (Fig. 160 through 163)
Number of specimens: 9.
Type of specimens: Fragments.

Figure 160 (above). Type XXI (intricate selvage with twining) twill plaiting, 2/2 interval; Subtype I, Variant 1, side 1.

Figure 162 (above). Type XXI (intricate selvage with twining), Subtype I, Variant 1, side 2.

Figure 161 (below). Schematic of Subtype I, Variant 1, side 1.

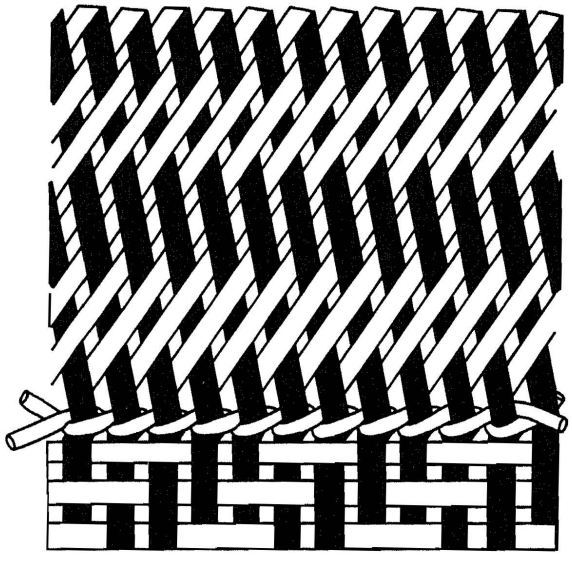
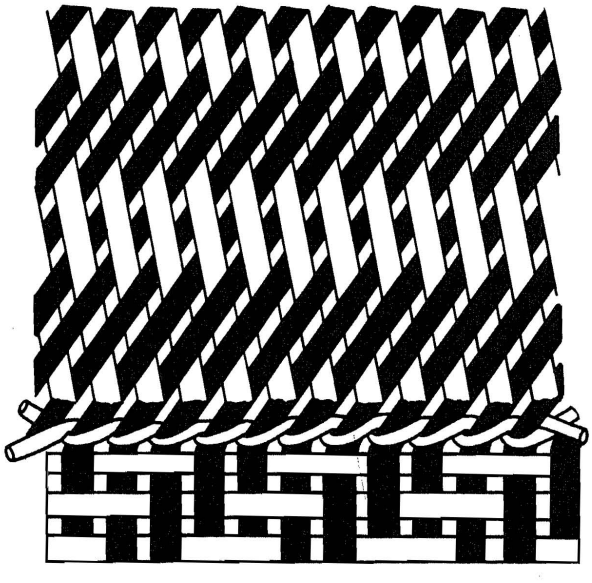


Figure 163 (below). Schematic of Subtype I, Variant 1, side 2.



Technique and Comments: Single elements pass over each other in a 2/2 interval. Body shifts include one example of a 2/3/2 interval. Selvages of this subtype include Variants 1, 9, 12, 13, 20, 31 and 35. These variants are lumped into a single subtype because they employ only two folds, the obtuse angle and the 90° apex, in the construction process. Termination is by clipping, without a third 90° angle fold. In Variants 1, 12, 13 and 35, the terminal elements pass over one element after the apex fold and are then plaited for a variable number of intervals until they are clipped off. In Variants 9 and 31, terminal elements pass under one element after the apex fold and are likewise plaited for a variable number of intervals before clipping. In Variant 20, terminal elements pass over two elements after the apex fold and are subsequently plaited and clipped. The complete post-apex fold plaiting sequence for all variants of this selvage subtype is presented in Table 140, together with the number of specimens per variant. There are no representatives of Variants 31 and 35 in the Type XXI intricate selvage with twining sample.

All specimens of this subtype are reinforced at the obtuse angle fold with a single circuit of simple twining. In eight cases, wefts are 2-ply unspun S-twist and engage two elements at each weft crossing; in one case, 2-ply unspun S-twist wefts engage three elements at each weft crossing. All specimens of this subtype are undecorated, unmended, unpitched and not naturally watertight. Seven specimens exhibit light to moderate wear on both surfaces and two are unworn. Three worn specimens are stained. A human coprolite adheres to the surface of one specimen. There are no representatives of Variant 28 in the Type XXI intricate selvage with twining sample.

Table 140. Variants of Type XXI, Subtype I intricate selvage with twining.

Variant	*Plaiting Sequence*	*No. Specimens*
1	Apex Fold (under 1/2/2/2) Clipped	3
9	Apex Fold (over 1/2/2/2) Clipped	1
12	Apex Fold (under 1/2/2/1) Clipped	2
13	Apex Fold (under 1/2/2/2/1) Clipped	1
20	Apex Fold (over 2/2) Clipped	2
31	Apex Fold (over 1/2/2/2) Clipped	0
35	Apex Fold (under 1/2/2/1) Clipped	0

Measurements: Range in diameter of plaiting elements, 4–9.4 mm; mean diameter of plaiting elements, 5.44 mm; range in angle of crossing of plaiting elements, (on selvage), 70°–140°; mean angle of crossing of plaiting elements, (on selvage), 110°; range in diameter of twining reinforcements, 1.5–4.7 mm; mean diameter of twining reinforcements, 4 mm; range in width of selvage, 10.9–56.7 mm; mean width of selvage, 32.2 mm.

Type XXI, Subtype II (Fig. 164 through 167)
Number of specimens: 85.
Type of specimens: Complete, 1; fragments, 84.

Technique and Comments: Single and, in one case, double elements pass over each other in a 2/2 interval. Body shifts include examples of 2/3/2 and 2/3/3/3/2 intervals. Selvages of this subtype include Variants 2, 3, 4, 5, 6, 7, 15, 16, 18, 19, 21, 22, 24, 26 and 28. These variants are lumped into a single subtype because they employ three folds—the obtuse angle, the 90° apex and a terminal 90° fold—in the construction process; in all cases, the terminal element initially passes over or under a single element after the apex fold. In Variants 2, 6, 15, 21, 22 and 26, the terminal elements pass over one element after the apex fold and are then plaited for a variable number of intervals before the third 90° fold. After the third 90° fold, the elements are again plaited for a variable number of intervals and then clipped off. In all of these variants, the last interval before the third 90° fold is over one. In Variants 4, 5, 7, 16, 24 and 28, the terminal elements again pass over one element after the apex fold and are then plaited for a variable number of intervals before the third 90° fold. In all of these variants, the last interval before the third 90° fold is under one. After the third 90° fold, the elements are plaited for a variable number of intervals and then clipped off. In Variants 3, 18 and 19, terminal elements pass under one element after the apex fold and are then plaited for a variable number of intervals before the third 90° fold. In all of these variants, the last interval before the third 90° fold is over one. After the third 90° fold, the elements are plaited for a variable number of intervals and then clipped off. The complete post-apex fold plaiting sequence for all variants of this selvage subtype is presented in Table 141, together with number of specimens per variant.

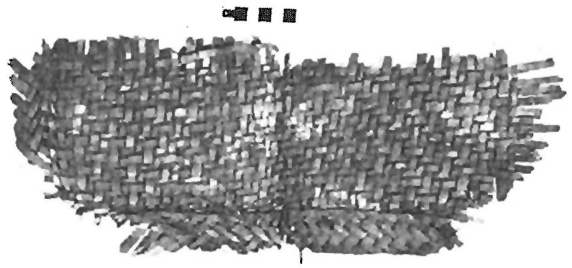


Figure 164. Type XXI (intricate selvage with twining), Subtype II, Variant 2, side 1.

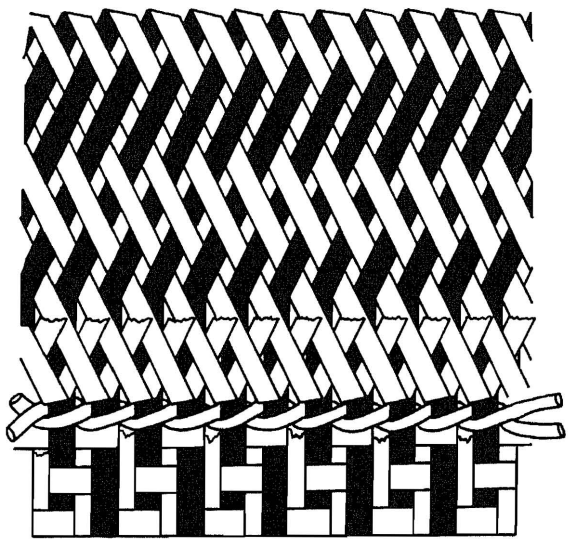


Figure 165. Schematic of Subtype II, Variant 2, side 1.

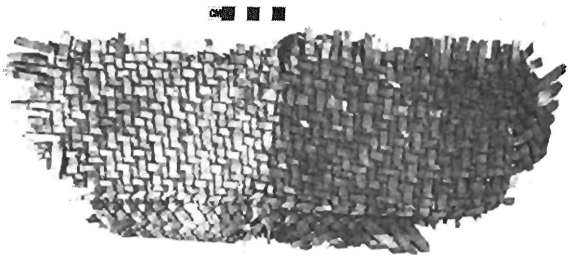


Figure 166. Type XXI (intricate selvage with twining), Subtype II, Variant 2, side 1.

Figure 167. Schematic of Subtype II, Variant 2, side 2.

All specimens of this subtype are reinforced at the obtuse angle fold with a single circuit of simple twining. In 61 cases, wefts are 2-ply unspun S-twist and engage two elements at each weft crossing; in 18 cases, identical wefts engage one element at each weft crossing. In one case, 2-ply unspun S-twist wefts engage three elements at each weft crossing. The remaining specimens include one example of 2-ply unspun Z-twist wefts engaging one element at each weft crossing; three examples of 2-ply unspun Z-twist wefts engaging one element at each weft crossing, and one example of 2-ply Z-spun S-twist cordage wefts engaging one element at each weft crossing. All specimens of this subtype are unmended, unpitched and not naturally watertight. One specimen is decorated with simple linear designs produced by alternations of sets of light and dark plaiting elements. The single complete specimen of this subtype is a large and exceptionally well preserved Variant 6 burial mat. Seventy-three specimens exhibit light to moderate wear on one surface only. Eight specimens are unworn. Foreign material adhering to the surface of one or more specimens includes *Gossypium* sp. fibers, *Zea mays* husks, seeds, plant epidermis, feathers and hair (all genus/species unknown).

Measurements: Range in diameter of plaiting elements, 1.5–13.7 mm; mean diameter of plaiting elements, 6.82 mm; range in angle of crossing of plaiting elements (on selvage), 92°–125°; mean angle of crossing of plaiting elements (on selvage), 92°–125°; mean angle of crossing of plaiting elements (on selvage), 108.94°; range in diameter of twining reinforcements, 2.1–7.8 mm; mean diammeter of twining reinforcements, 5.1

Table 141. Variants of Types XXI, Subtype II intricate selvage with twining.

Variant	*Plaiting Sequence*	*No. Specimens*
2	Apex Fold (over 1/2/2/1/1) 90° Fold (under 1) Clipped	34
3	Apex Fold (under 1/2/2/1) 90° Fold (under 1) Clipped	3
4	Apex Fold (over 1/2/2/1/1/1) 90° Fold (under 1/1) Clipped	10
5	Apex Fold (over 1/2/2/2/1/1) 90° Fold (under 1) Clipped	16
6	Apex Fold (over 1/2/2/2/1) 90° Fold (under 1) Clipped	11
7	Apex Fold (over 1/2/2/2/1/1/1) 90° Fold (over 1/1) Clipped	3
15	Apex Fold (over 1/2/2/2/2/2/1) 90° Fold (under 1) Clipped	1
16	Apex Fold (over 1/2/2/1/2/1) 90° Fold (under 1) Clipped	1
18	Apex Fold (under 1/2/1/1) 90° Fold (under 1) Clipped	1
19	Apex Fold (under 1/2/2/2/2/1) 90° Fold (under 1) Clipped	1
21	Apex Fold (over 1/2/1/1) 90° Fold (under 1) Clipped	1
22	Apex Fold (over 1/1/2/1/1) 90° Fold (under 1) Clipped	1
24	Apex Fold (over 1/2/2/2/2/1) 90° Fold (over 1/1) Clipped	1
26	Apex Fold (over 1/2/2/2/2/1/1) 90° Fold (under 1) Clipped	1
28	Apex Fold (over 1/2/2/2/2/2/1/1) 90° Fold (over 1/1) Clipped	0

Table 142. Variants of Type XXI, Subtype III intricate selvage with twining.

Variant	*Plaiting Sequence*	*No. Specimens*
8	Apex Fold (under 2/2/2/1) 90° Fold (under 1) Clipped	1
11	Apex Fold (over 2/2/1/1/1) 90° Fold (under 1) Clipped	1
14	Apex Fold (over 2/2/2/1/1/1) 90° Fold (over 1/1) Clipped	1
17	Apex Fold (over 2/2/2/1/1) 90° Fold (over 1/1) Clipped	1
27	Apex Fold (over 2/2/2/2/2/1) 90° Fold (over 1/1) Clipped	0
30	Apex Fold (under 2/2/2/1/1) 90° Fold (over 1/1) Clipped	0

mm; range in width of selvage, 11.1–66.5 mm; mean width of selvage, 34.82 mm; length (complete specimen), 1180 mm; width (complete specimen), 1120 mm.

Type XXI, Subtype III (Fig. 168 through 171).
Number of specimens: 4.
Type of specimens: Fragments, 4.

Technique and Comments: Single elements pass over each other in a 2/2 interval. Body shifts include examples of 2/1/2, 2/3/2 and 2/6/2 intervals. Selvages of this subtype include Variants, 8, 11, 14, 17, 27 and 30. These variants are lumped into a single subtype because they employ three folds—the obtuse angle, the 90° apex and a terminal 90° fold—in the construction process; in all cases, the terminal element initially passes over or under a single element after the apex fold. In Variants 11, 14, 17 and 27, the terminal elements pass over two elements after the apex fold and are then plaited for a variable number of intervals before the third 90° fold. After the third 90° fold, the elements are again plaited for a variable number of intervals and then clipped off. In Variants 8 and 30, the basic selvage construction sequence is as described above, except that terminal elements initially pass under two elements after the 90° apex fold. The complete post-apex fold plaiting sequence for all variants of this selvage subtype is presented in Table 142, together with number of specimens per variant. There are no representatives of Variants 27 and 30 in the Type XXI intricate selvage with twining sample.

All samples of this subtype are reinforced at the obtuse angle fold with a single circuit of simple twining. In three cases, wefts are 2-ply unspun S-twist and engage two elements at each weft crossing; in one case, 2-ply unspun Z-twist wefts engage one element at each weft crossing. All specimens of this subtype are undecorated, unmended, unpitched and not naturally watertight. Three specimens exhibit moderate wear on

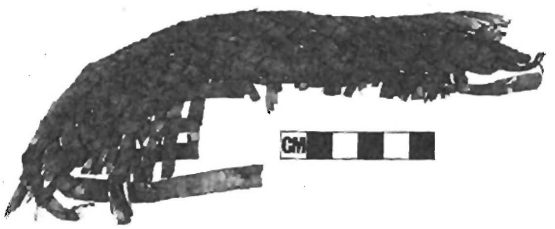


Figure 168. Type XXI (intricate selvage with twining), Subtype III, Variant 11, side 1.

Figure 170. Type XXI (intricate selvage with twining), Subtype III, Variant 11, side 2.

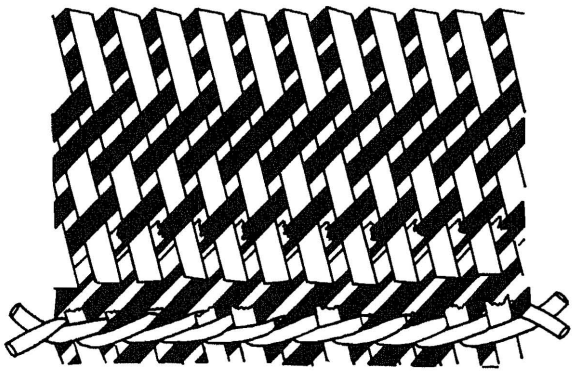


Figure 169. Schematic of Subtype III, Variant 11, side 2.

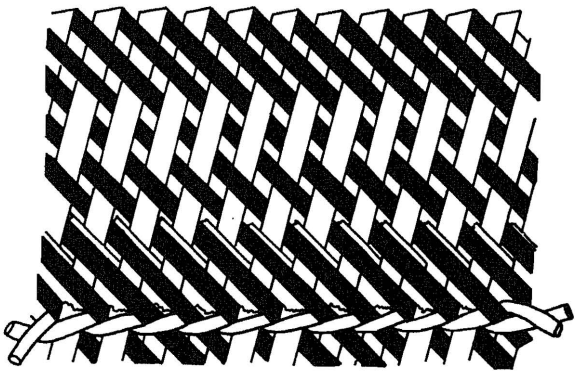


Figure 171. Schematic of Subtype III, Variant 11, side 2.

both surfaces and one specimen is heavily worn on one surface only; one specimen with wear on both sides is charred. A coprolite adheres to the surface of one specimen.

Measurements: Range in diameter of plaiting elements, 2.7–9 mm; mean diameter of plaiting elements, 7 mm; range in angle of crossing of plaiting elements (on selvage), 98°–120°; mean angle of crossing of plaiting elements (on selvage), 112.5°; range in diameter of twining reinforcements, 3.5–5.9 mm; mean diameter of twining reinforcements, 4.7 mm; range in width of selvage, 24.4–38.7 mm; mean width of selvage, 32.5 mm.

Type XXI, Subtype IV
Number of specimens: 2.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 2/2 interval. Body shifts include one example of a 2/1/2 interval. Selvages of this subtype include Variants 10, 25 and 32. These variants are lumped into a single subtype because they employ three folds—the obtuse angle, the 90° apex and a terminal 90° fold—in the construction process; in all cases, the terminal element initially passes over a single element after the 90° apex fold. The post-apex fold plaiting sequence of these variants is sufficiently distinct from any Subtype II variants to warrant placing them in a separate subtype. In all Subtype IV variants, the terminal elements pass over one element after the 90° apex fold and are plaited for a variable number of intervals before the third 90° fold. After the third 90° fold, the elements are again plaited for a variable number of intervals and then clipped off. The complete post-apex fold plaiting sequence is presented in Table 143, together with number of specimens per variant. There are no representatives of Variant 25 in the Type XXI intricate selvage with twining sample.

All specimens of this subtype are reinforced at the obtuse angle fold with a single circuit of simple twining. In both cases, wefts are 2-ply unspun S-twist and engage two elements at each weft crossing. Both specimens are undecorated, unmended, unpitched and not naturally watertight. Both specimens exhibit moderate to heavy

Table 143. Variants of Type XXI, Subtype IV intricate selvage with twining.

Variant	*Plaiting Sequence*	*No. Specimens*
10	Apex Fold (over 1/2/2/2/2/2/2/1) 90° Fold (over 1/2) Clipped	1
25	Apex Fold (over 1/2/2/2/1) 90° Fold (over 1/2) Clipped	0
32	Apex Fold (over 1/2/2/1/2/2/1) 90° Fold (under 1/2/1) Clipped	1

wear on both surfaces. One specimen is charred.

Measurements: Range in diameter of plaiting elements, 5.5–10.1 mm; mean diameter of plaiting elements (on selvage), 8 mm; mean angle of crossing of plaiting elements (on selvages), 108°; range in diameter of twining reinforcements, 6.6–6.7 mm; mean diameter of twining reinforcements, 6.65 mm; range in width of selvage, 51.5–64 mm; mean width of selvage, 57.75 mm.

(There are no representatives of selvage Subtype V in the Type XXI intricate selvage with twining sample.)

Type XXI, Subtype VI (Fig. 172 through 175)
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Single elements pass over each other in a 2/2 interval. Body shifts include examples of 2/1/2 and 2/3/2 intervals. Selvages of this subtype include Variants 23, 29 and 36, but only Variant 23 is represented here. These variants are lumped into a single subtype because they employ four folds—the obtuse angle, the 90° apex and two terminal 90° folds—in the construction process; in all cases, terminal elements pass over and one element after the 90° apex fold and are plaited for a variable number of intervals before the third 90° fold. After the third 90° fold, the elements are again plaited for a variable number of intervals and then folded for a fourth time at a 90° angle. After the final 90° fold, the elements are plaited for another variable interval and then clipped. The complete post-apex fold plaiting sequence for Variant 23 is: apex fold (over 1/2/2/2) 90° fold (over 1/1) 90° fold (over 1/2) clipped. In the single specimen of the subtype in the Type XXI intricate selvage with twining sample, 2-ply unspun Z-twist wefts engage two elements at each weft crossing. The specimen is undecorated, unmended, unpitched and not naturally watertight. Light to moderate wear is present on both surfaces.

Measurements: Range in diameter of plaiting elements, 4–7.7 mm; mean diameter of plaiting elements, 5.44 mm; mean angle of crossing of plaiting elements (on selvage), 105°; mean diameter of twining reinforcements, 3.9 mm; width of selvage, 39.7 mm.

Type XXI, Subtype Unknown
Number of specimens: 5.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. Due to the very fragmentary condition of these specimens, the post-apex fold plaiting sequence is not discernible. All of the extant twining reinforcements are 2-ply unspun S-twist and engage two elements at each weft crossing. All specimens are undecorated, unmended, unpitched and not naturally watertight. Four specimens exhibit moderate wear on both surfaces and one specimen is heavily worn on one surface only. Two specimens worn on both sides are charred. A white feather (genus/species unknown) adheres to the surface of one specimen.

Measurements: Range in diameter of plaiting elements, 2.5–9.7 mm; mean diameter of plaiting elements, 6.88 mm; range in angle of crossing of plaiting elements (on selvage), 92°–110°; mean angle of crossing of plaiting elements, 102.4°; range in diameter of twining reinforcements, 3.4–5.7 mm; mean diameter of twining reinforcements, 4.86 mm.

Type XXI (intricate selvage without twining): Twill Plaiting, 2/2 Interval
Form: Matting.
Number of specimens: 71.
Type of specimens: Fragments.

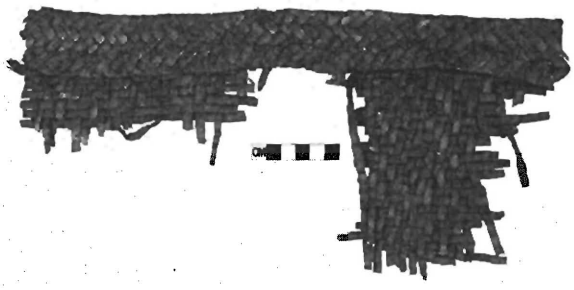


Figure 172. Type XXI (intricate selvage with twining), Subtype VI, Variant 23, side 1.

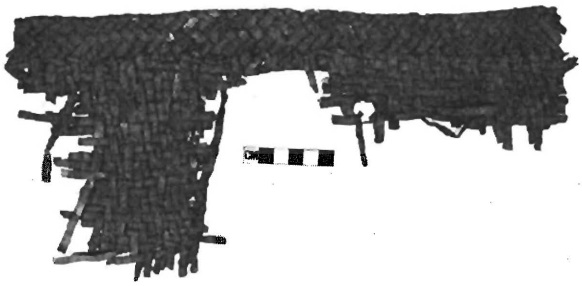


Figure 174. Type XXI (intricate selvage with twining), Subtype VI, Variant 23, side 2.

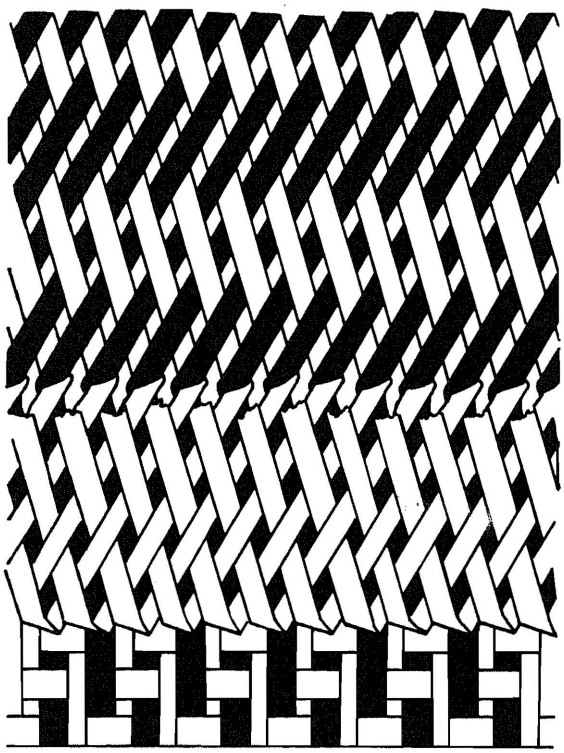


Figure 173. Schematic of Subtype VI, Variant 23, side 1.

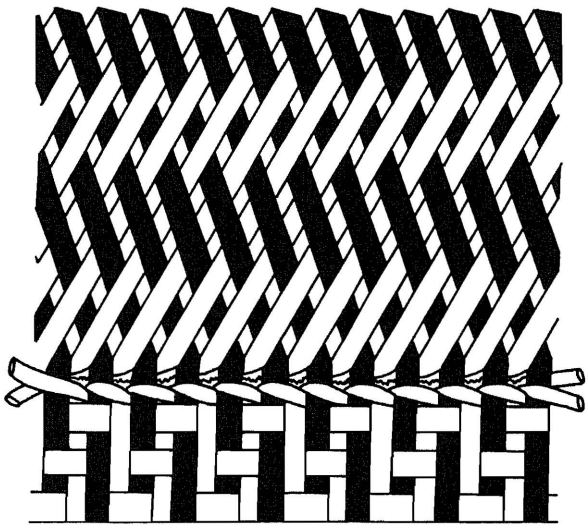


Figure 175. Schematic of Subtype VI, Variant 23, side 2.

Technique and Comments: All specimens of Type XXI intricate selvage without twining reinforcements are described below by subtype. With the exception of the absence of a circuit of simple twining at the obtuse angle fold, these subtypes are identical in all particulars to the subtypes of Type XXI described above.

Type XXI, Subtype I
Number of specimens: 5.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. Selvages of this subtype include two examples of Variant 12 and one each of Variants 1, 20 and 31. There are no representatives of Variants 9, 13, and 35. All specimens are undecorated, unmended, unpitched and not naturally watertight. Four specimens exhibit light to moderate wear on both surfaces and one specimen is heavily worn on one surface only. One specimen worn on both sides also is stained.

Measurements: Range in diameter of plaiting elements, 1.22–8 mm; mean diameter of plaiting elements, 5 mm; range in angle of crossing of plaiting elements (on selvage), 73°–112°; mean angle of crossing of plaiting elements (on selvage), 98°; range in width of selvage, 16.8–41.9 mm; mean width of selvage, 30 mm.

Type XXI, Subtype II
Number of specimens: 55.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 2/2 interval. Body shifts include numerous examples of 2/1/2 intervals. Selvages of this subtype include 23 examples of Variant 2, eight examples of Variant 4, 10 examples of Variant 5, nine examples of Variant 6, one example each of Variants 7 and 26, and two examples of Variant 28. There are no representatives of Variants 3, 15, 16, 18, 19, 21, 22 and 24. All specimens are undecorated, unmended, unpitched and not naturally watertight. Forty-five specimens exhibit light to moderate wear on both surfaces and six are heavily worn on both surfaces. Four specimens exhibit moderate to heavy wear on one surface only. Sixteen specimens worn on both sides are charred and 13 are stained. Foreign material adhering to the surface of one or more specimens include human hair, *Gossypium* sp. fibers and *Cucurbita pepo* fragments, as well as unidentified plant epidermis, feathers and seeds.

Measurements: Range in diameter of plaiting elements, 3.22–17 mm; mean diameter of plaiting elements, 7.37 mm; range in angle of crossing of plaiting elements (on selvage), 100°–131°; mean angle of crossing of plaiting elements (on selvage), 111.89 mm; range in width of selvage, 16.5–32 mm; mean width of selvage, 24.15 mm.

Type XXI, Subtype III
Number of specimens: 2.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. Selvages of this subtype include one example each of Variants 27 and 30. There are no representatives of Variants 8, 11, 14 and 17. Both specimens are undecorated, unmended, unpitched and not naturally watertight. One specimen has moderate to heavy wear on both surfaces and the other is lightly worn on one surface only.

Measurements: Range in diameter of plaiting elements, 2.5–6 mm; mean diameter of plaiting elements, 4.12 mm; range in angle of crossing of plaiting elements (on selvage), 94°–105°; mean angle of crossing of plaiting elements (on selvage), 99.5°; range in width of selvage, 16.5–32 mm; mean width of selvage, 24.25 mm.

Type XXI, Subtype IV (Fig. 176 through 179)
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. The single specimen of this subtype has a Variant 25 selvage. The specimen is undecorated, unmended, unpitched and not naturally watertight. Moderate wear is present on both surfaces. The specimen is stained.

Measurements: Mean diameter of plaiting elements, 5 mm; mean angle of crossing of plaiting elements (on selvage), 92°; width of selvage, 37.4 mm.

Type XXI, Subtype V (Fig. 180 through 183)
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. Selvages of this subtype include Variants 33 and 34. These variants are lumped into a single subtype because they employ three folds—the obtuse angle, the 90° apex and a terminal 90° fold—in the construction process; in all cases, they employ a 2/3 interval in the post-apex fold construction sequence. In all subtype V variants, the terminal elements pass over one element after the 90° apex fold. After the third 90° fold, the elements are again plaited for a variable number of intervals and then clipped off. The complete post-apex fold plaiting sequence for Variant 33, which is represented here, is: apex fold (over 1/2/2/2/3) 90° fold (over 1/1) clipped. The single specimen of this subtype is undecorated, unmended, unpitched and not naturally watertight. Moderate wear is present on both surfaces.

Measurements: Range in diameter of plaiting elements, 7.2–10.2 mm; mean diameter of plaiting elements, 8.7 mm; mean angle of crossing of plaiting elements (on selvage), 114°; width of selvage, 60.6 mm.

Type XXI, Subtype VI (Fig. 184 through 187)
Number of specimens: 2.
Type of specimens: Fragments.

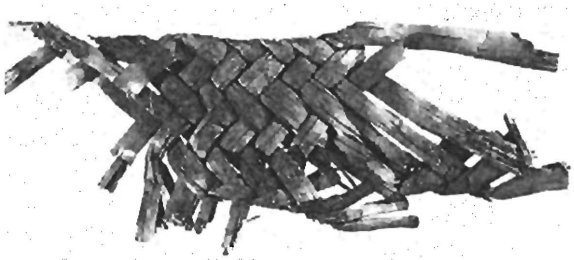


Figure 176. Type XXI (intricate selvage with twining), Subtype IV, Variant 25, side 1.

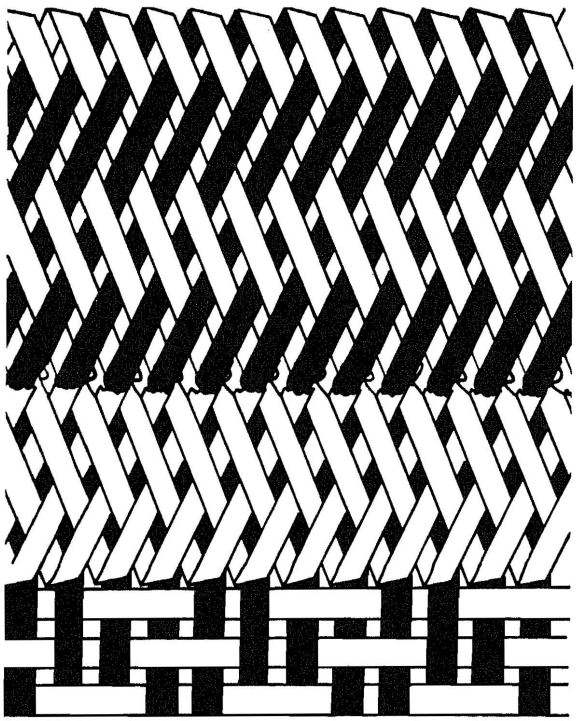


Figure 177. Schematic of Subtype IV, Variant 25, side 1.

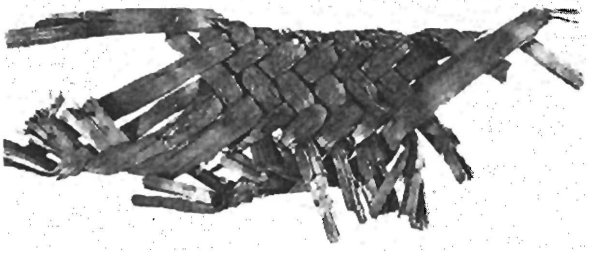


Figure 178. Type XXI (intricate selvage with twining), Subtype IV, Variant 25, side 2.

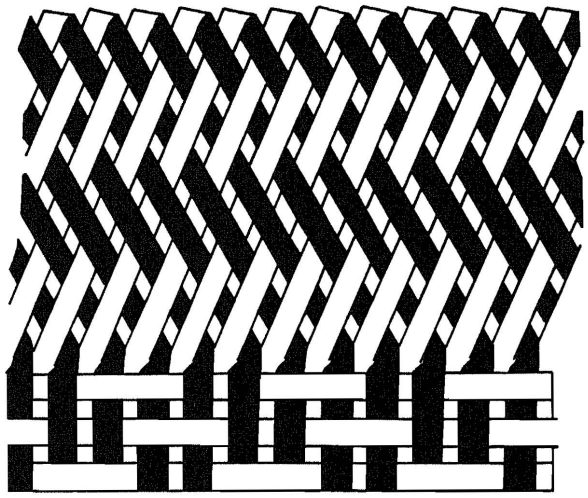


Figure 179. Schematic of Subtype IV, Variant 25, side 2.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. Selvages of this sub-type include one example each of variants 29 and 36. There are no representatives of Variant 23 in the Antelope House sample. Both specimens are undecorated, unmended, unpitched and not naturally watertight. Both specimens exhibit light wear on both surfaces. One has an incinerated substance of unknown composition adhering to one surface.

Measurements: Range in diameter of plaiting elements, 4.4–7 mm; mean diameter of plaiting elements, 6.13 mm; range in angle of crossing of plaiting elements (on selvage), 93°–106°; mean angle of crossing of plaiting elements (on selvage), 99.5°; range in width of selvage, 37.4–38.6 mm; mean width of selvage, 38 mm.

Type XXI, Subtype Unknown

Number of specimens: 5.

Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 2/2 interval. No body shifts are present. Due to the fragmentary condition of these specimens, the post-apex fold plaiting sequence is not discernible. All specimens are undecorated, unmended, unpitched and not naturally watertight. All specimens exhibit moderate attrition wear on both surfaces and one is charred.

Measurements: Range in diameter of plaiting elements, 4.3–9 mm; mean diameter of plaiting

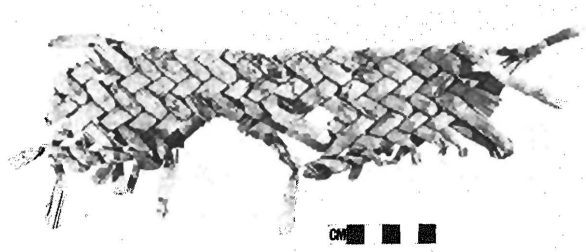


Figure 180. Type XXI (intricate selvage with twining), Subtype V, Variant 33, side 1.

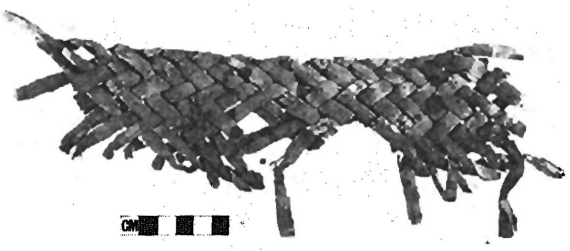


Figure 182. Type XXI (intricate selvage with twining), Subtype V, Variant 33, side 2.

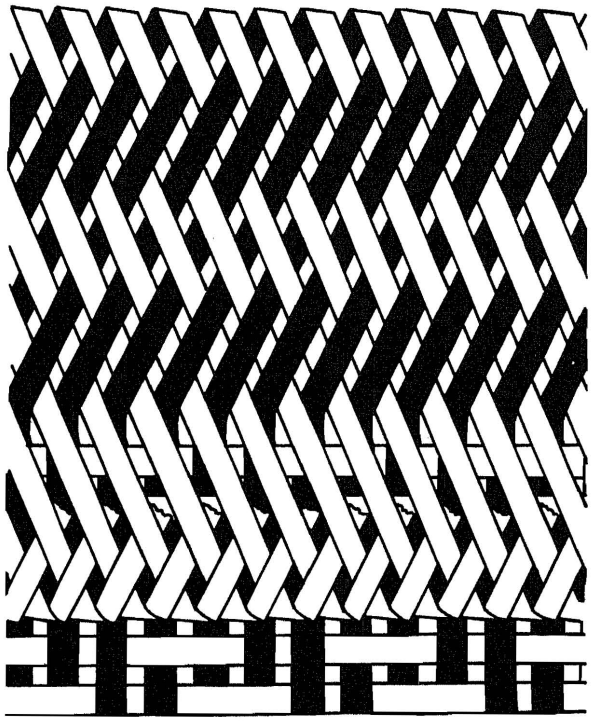


Figure 181. Schematic of Subtype V, Variant 33, side 1.

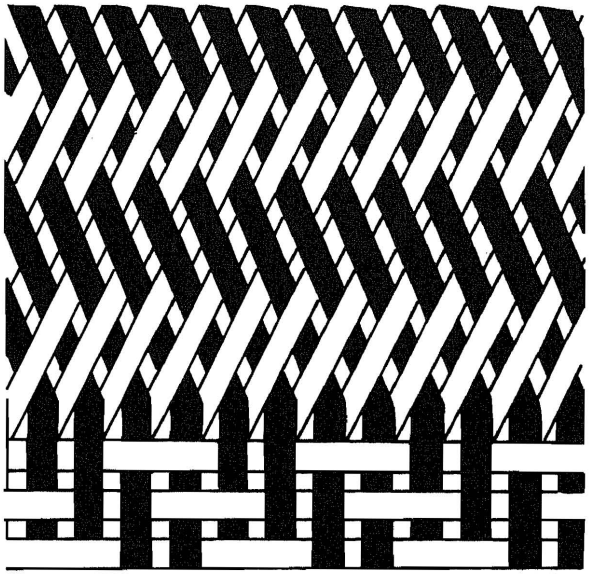


Figure 183. Schematic of Subtype V, Variant 33, side 2.

elements, 6.61 mm; range in angle of crossing of plaiting elements (on selvage), 90°–113°; mean angle of crossing of plaiting elements (on selvage), 104°.

Type XXI (180° self selvage): Twill Plaiting, 2/2 Interval

(Fig. 188, 189, 190)

Form: Ring basket.

Number of specimens: 27.

Type of specimens: Complete, 5; fragments, 22.

Number of individual ring baskets represented: 26 (minimum).

Technique and Comments: These and all other ring baskets from Antelope House conform in most particulars to the basic construction pattern described by Morris and Burgh (1942: 19–20). A flat plaited mat without selvage is produced and subjected to prolonged immersion in water. The mat then is distorted to the desired configuration (e.g., bowl or tray) by forcing it through or around a hoop or ring of *Rhus* sp. or *Salix* sp. The basic selvage treatment has terminal elements folded at a 180° angle around the wooden ring after which they are secured either by simple twining or a double twined running stitch and clipped off. The selvage may be folded to the inside of the vessel or to the outside. In this variant, single elements pass over each other in a 2/2 interval. Shifts include examples of 2/1/2,

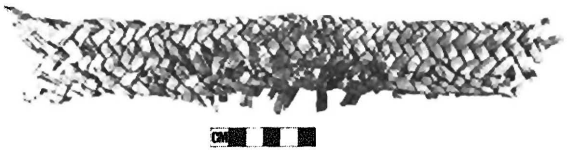


Figure 184. Type XXI (intricate selvage with twining), Subtype VI, Variant 36, side 1.

Figure 186. Type XXI (intricate selvage with twining), Subtype VI, Variant 36, side 2.

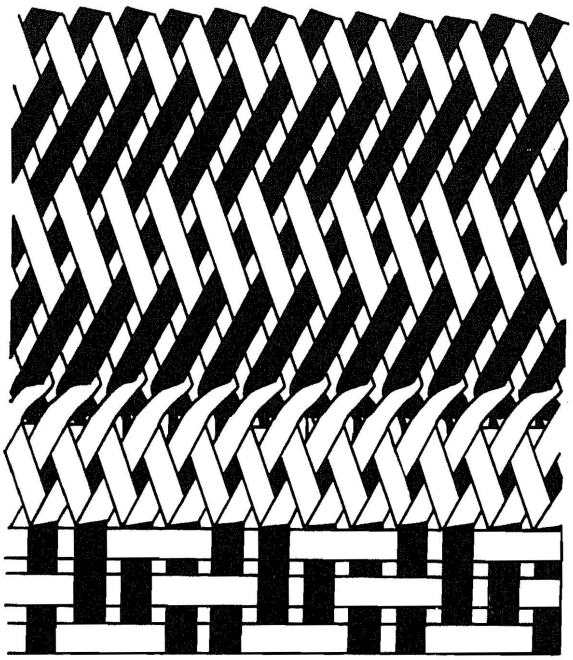


Figure 185 (above). Schematic of Subtype VI, Variant 36, side 1.

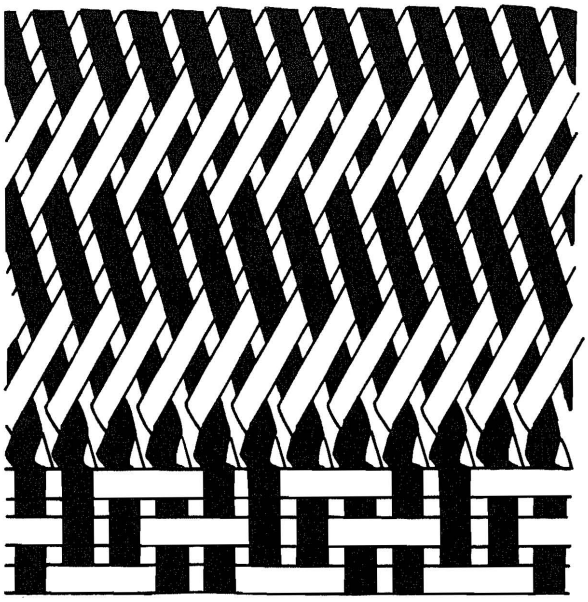


Figure 187 (above). Schematic of Subtype VI, Variant 36, side 2.

Figure 188 (below). Type XXI (180° self selvage) ring basket with plait meander design; convex surface.

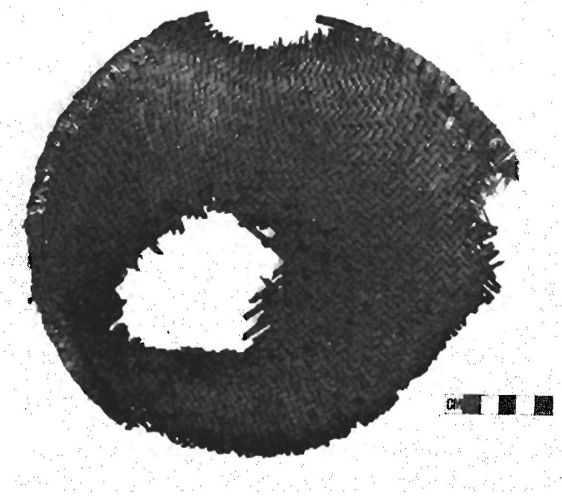


Figure 189 (below). Complete Type XXI (180° self selvage) ring basket with plain meander design; convex surface.

Figure 190. Type XXI (180° self selvage) ring basket fragment; concave surface. Note double twined running stitch securing selvage.

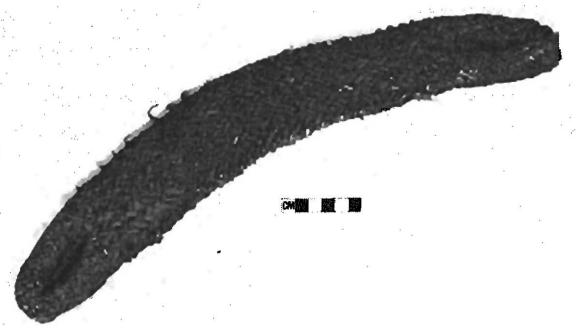


Figure 191. Complete Type XXI (continuous selvage) compound construction tumpline; concave surface. Note human hair running stitches on both margins of body.

2/3/2, 2/6/2, 2/3/3/2, 2/1/1/1/2 and 2/3/1/3/2 intervals. In eight cases, one or more of these shifts is regularly employed to produce patterns on the bases of the baskets. In all cases, patterns are variations of the plain meanders figured by Morris and Burgh (1942: Fig. 10 f, g). In seven cases, the ring is *Rhus* sp. with cortex, and in four cases *Salix* sp. with cortex. Four other rings are decorticated *Salix* sp. In all other representatives of this variant, the wooden rings are missing. On 17 specimens, the selvage is folded to the outer surface of the basket, and in six cases, it is folded to the interior. In four cases, direction of folding is not discernible. In 23 specimens, the folded selvage is secured by a single circuit of 2-ply twining with unspun wefts. Sixteen of these twining circuits are S-twist and seven are Z-twist. The selvage of one specimen is secured with 2-ply Z-spun S-twist cordage wefts. In the remaining three specimens, a double twined running stitch is employed to secure the selvage (cf. Emery 1966: Fig. 353). Two to four terminal elements are engaged at each crossing with wefts or running stitches. In most cases, the binding circuit is terminated by a simple overhand knot, but there is one example each of termination by a square knot and a granny knot. The complete specimens include two shallow bowls and three shallow trays. All specimens are unmended, unpitched and not naturally watertight. Twenty-three specimens exhibit moderate to heavy wear on both surfaces and two exhibit moderate wear on the interior surface only. Nine worn specimens also are charred. Four worn specimens are heavily stained. One specimen exhibits use sheen on the exterior surface but is otherwise unworn. Foreign matter adhering to the surface of one or more specimens includes fibers of *Gossypium* sp., coprolites, husks of *Zea mays* and feathers (genus/species unknown).

Measurements (all specimens): Range in diameter of plaiting elements, 2–8 mm; mean diameter of plaiting elements, 4.45 mm; range in angle of crossing of plaiting elements, 80°–150°; mean angle of crossing of plaiting elements, 91.8°; range in diameter of ring, 3–96 mm; mean diameter of ring, 6.66 mm; range in diameter of binding circuit, 1–5 mm; mean diameter of binding circuit, 2.46 mm; range in number of elements bound at each weft or running stitch crossing, 2–4; mean number of elements bound at each weft or running stitch crossing, 2.22.

Measurements (complete specimens): Container 1—maximum diameter of rim, 90 mm; maximum depth, N.A. (specimen is compressed). Container 2—maximum diameter of rim, 149 mm; maximum depth, 32 mm. Container 3—maximum diameter of rim, 250 mm; maximum depth, 60 mm. Container 4—maximum diameter of rim, 290 mm; maximum depth, N.A. (specimen is compressed). Container 5—maximum diameter of rim, 13 mm; maximum depth, 10 mm.

Type XXI (continuous selvage): Twill Plaiting, 2/2 Interval (Fig. 191)
Form: Tumpline.
Number of specimens: 1.
Type of specimen: Complete.

Technique and Comments: One complete Type XXI and one complete Type XXII tumpline were recovered from Antelope House. Though construction details vary, their basic configurations are similar. Tumplines are elongate, plaited burden supports, or carriers, with an integral loop or aperture at either end. They may be one-piece constructions or a number of separate pieces may be combined to produce a compound plaited construction. Since the finished tumplines, notably the Type XXII specimen, have no real edges or rims, the selvage variety is herein designated as continuous. The single Type XXI tumpline is a compound construction composed of four separate parts. The body of the tumpline is made of two plaited bands, one of 20 and the other of 28 elements. The end loops are 40- and 48-element plaited bands, respectively. In all cases, the component bands pass over each other in a 2/2 interval. Occasional 2/3/2 and 2/1/3/1/2 shifts are present. The two bands that compose the body of the tumpline are arranged back-to-back and are joined on both margins with a circuit of overcast or whipping stitches. The stitches are single-ply unspun *Yucca angustissima* elements (mean diameter, 2 mm). Near the midpoint of one margin, an exhausted stitching element is spliced to a new element with a square knot. The bands that compose the end loops are folded into a U-shape with their side selvages facing inward and are affixed to the tumpline by plaiting the open ends of the body bands to the open ends of the loop bands. The interplaiting is reinforced with several irregular circuits of simple 2-ply unspun S-twist twining (mean diameter, 1.9 mm). These *Yucca angustissima* twining circuits are terminated with square knots. The side selvages on the interior portions of the end loops are stitched together with overcast or whipping stitches, again composed of single-ply unspun *Yucca angustissima* elements. Where necessary, these elements are spliced with overhand knots. The specimen is decorated with a row of running stitches along both margins of the body some 1–1.5 cm from the edge. While most of the stitching elements are missing, the extant segments appear to be 2-ply Z-spun S-twist human hair cordage (mean diameter, 4 mm). This specimen is unmended, unpitched and not naturally watertight. Light wear is present on the convex, or exterior, surface and the concave, or interior, surface has light use sheen.

Measurements: Range in diameter of plaiting elements, 1.7–6 mm; mean diameter of plaiting elements, 3.51 mm; mean angle of crossing of plaiting elements, 80°; maximum interior diameter of end loops, 52 mm; minimum interior diameter of end loops, 11 mm; length, 456 mm; width, 69 mm; thickness (at midpoint of body), 9.6 mm.

Type XXII (90° self selvage): Twill Plaiting, 3/3 Interval Form: Matting.
Number of specimens: 3.
Type of specimens: Fragments.
Number of individual mats represented: 3.

Technique and Comments: Single elements pass over each other in a 3/3 interval. Shifts include examples of 3/1/3 and 3/2/3 intervals. Selvage treatment has terminal elements folded back at a 90° angle and replaited into the body of the mat. Two specimens have an additional wrapping stitch at the apex of the 90° folds. The wrapping stitch adds rigidity to the basic 90° selvage. All specimens are undecorated, unpitched and not naturally watertight. One specimen has been mended via insertion of a new plaiting element, which is affixed to a worn element with a figure-8 knot. All specimens exhibit moderate to heavy wear on both surfaces.

Measurements: Range in diameter of plaiting elements, 4.15–9.20 mm; mean diameter of plaiting elements, 6.71 mm; range in angle of crossing of plaiting elements, 80°–93°; mean angle of crossing of plaiting elements, 84.33°.

Type XXII (90° self selvage): Twill Plaiting, 3/3 Interval
Form: Four-element plaited band.
Number of specimens: 1.
Type of specimen: Complete.

Technique and Comments: With the exception of interval, plaited bands of this type are identical in basic configuration to Types XX and XXI plaited bands. Selvage treatment is likewise identical. In this variant, four double or treble elements functioning as a unit pass over each other in a 3/3 interval. There are no shifts. The specimen is undecorated, unmended, unpitched and not naturally watertight. Heavy wear is present on both surfaces. The specimen is charred and fibers of *Gossypium* sp. adhere to one surface.

Measurements: Mean diameter of plaiting elements, 12 mm; mean angle of crossing of plaiting elements, 70°; length, 140 mm; width, 12.8 mm.

Type XXII (90° self selvage): Twill Plaiting, 3/3 Interval Form: Pot rest.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: With the exception of interval, the single representative of this form group is identical to the truncated cylinder pot rests of Type XXI. In this variant, single elements pass over each other in a 3/3 interval. Shifts include examples of 3/1/1/2/1/1/3 and 3/2/2/2/3 intervals. The specimen is undecorated, unmended, unpitched and not naturally watertight. Heavy wear is present on all surfaces and this specimen is crushed through use. The specimen is charred and *Gossypium* sp. fibers adhere to one surface.

Measurements: Mean diameter of plaiting elements, 3 mm; mean angle of crossing of plaiting elements, 68°; exterior diameter, 122 mm; interior diameter, 52 mm; height (specimen is compressed) 15.5 mm

Type XXII (intricate selvage with twining): Twill Plaiting, 3/3 Interval
Form: Matting.
Number of specimens: 7.
Type of specimens: Fragments.

Technique and Comments: All specimens of Type XXII intricate selvage with twining reinforcements are described below by subtype. With the exception of body plaiting interval, these subtypes are identical to the Type XXI intricate selvage with twining subtypes. There are no representatives of Subtypes III, IV or VI in the Type XXII intricate selvage with twining sample.

Type XXII, Subtype I
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Single elements pass over each other in a 3/3 interval. No body shifts are present. The single specimen of this subtype has a Variant 35 selvage. The specimen is reinforced at the obtuse angle fold with a single circuit of simple 2-ply unspun S-twist twining, which engages two elements at each weft crossing. The specimen is undecorated, unmended, unpitched and not naturally watertight. A length of 2-ply S-spun Z-twist *Yucca* sp. cordage (mean diameter, 3.2 mm) is affixed near the apex fold and is secured with a granny knot and a square knot. The function of this cordage is unknown. Moderate wear is present on both surfaces.

Measurements: Mean diameter of plaiting elements, 6.5 mm; mean angle of crossing of plaiting elements (on selvage), 77°; mean diameter of twining reinforcements, 5.5 mm; width of selvage, 40 mm.

Type XXII, Subtype II
Number of specimens: 5.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in a 3/3 interval. No body shifts are present. Selvages of this subtype include four examples of Variant 5 and one of Variant 7. All specimens of this subtype are reinforced at the obtuse angle fold with a single circuit of twining. In two cases, wefts are 2-ply unspun S-twist and engage two elements at each weft crossing. In three cases, identical wefts engage three elements at each weft crossing. All specimens are undecorated, unmended, unpitched and not naturally watertight. Three specimens exhibit moderate to heavy wear on both surfaces and two have moderate to heavy wear on one surface only. Three specimens worn on both surfaces are charred and one specimen worn on one surface is stained. A granular substance of unknown composition adheres to both surfaces of one specimen.

Measurements: Range in diameter of plaiting elements, 3.2–9.5 mm; mean diameter of plaiting elements, 5.29 mm; range in angle of crossing of plaiting elements (on selvage), 104°–117°; mean angle of crossing of plaiting elements (on selvage), 109.8°; range in diameter of twining reinforcements, 3.6–6.2 mm; mean diameter of twining reinforcements, 4.58 mm; range in width of selvage, 21.9–62.7 mm; mean width of selvage, 34.48 mm.

Type XXII, Subtype V
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: Single elements pass over each other in a 3/3 interval. Body shifts include examples of 3/1/3 and 3/5/3 intervals. The single specimen of this subtype has a Variant 34 selvage. The specimen is reinforced at the obtuse angle fold with a single circuit of simple 2-ply unspun, S-twist twining which engages two elements at each weft crossing. The specimen is undecorated, unmended, unpitched, and not naturally watertight. Moderate attrition wear is present on both surfaces. Additionally, feathers (genus/species unknown), *Zea mays* husks and a coprolite are adhering to one surface of the specimen.

Measurements: Range in diameter of plaiting elements, 4–7 mm; mean diameter of plaiting elements, 5.5 mm; range and mean angle of crossing of plaiting elements (on selvage), 110°; range and mean diameter of twining reinforcements, 5.4 mm; width of selvage, 46.5 mm.

Chronological Position	*Material*	*Provenience*	*No. Specimen*
MP–III	*Scirpus* spp.	South Room Block Rm. 21	1

Type XXII(intricate selvage without twining): Twill Plaiting, 3/3 Interval (cont.)
Form: Matting.
Number of specimens: 2.
Type of specimens: Fragments, 2.

Technique and Comments: All specimens of Type XXII intricate selvage without twining reinforcements are described below by subtype. With the exception of body plaiting interval, these subtypes are identical in all particulars to the Type XXI intricate selvage without twining subtypes. There are no representatives of Subtypes I, III, IV, V or VI in the Type XXII intricate selvage without twining sample.

Subtype II
Number of specimens: 2.
Type of specimens: Fragments, 2.

Technique and Comments: Single elements pass over each other in a 3/3 interval. There are no body shifts represented. Selvages include two examples of Variant 5. There are no representatives of Variants 2, 3, 4, 6, 7, 15, 16, 18, 21, 22, 24, 26 and 28 in the Type XXII intricate selvage without twining sample. Both specimens are undecorated, unmended, unpitched, and not naturally watertight. Both specimens exhibit moderate to heavy attrition wear on both surfaces. Additionally, one is stained and the other is charred.

Measurements: Range in diameter of plaiting elements, 3–8.3 mm; mean diameter of plaiting elements, 5.75 mm; range in angle of crossing of plaiting elements (on selvage), 102°–111°; mean angle of crossing of plaiting elements (on selvage), 106.5°; range in width of selvage, 37–41 mm; mean width of selvage, 39 mm.

Chronological Position	*Material*	*Provenience*	*No. Specimens*
EP–III	*Scirpus* spp.	South Room Block Rm. 21 Flr. 2	2

Type XXII (180° self selvage): Twill Plaiting, 3/3 Interval
(Fig. 192, 193, 194, 195)
Form: Ring basket.
Number of specimens: 6.
Type of specimens: Complete.

Technique and Comments: With the exception of interval, ring baskets of this type are identical in basic configuration and construction to Type XXI ring baskets. In all but one case, selvage treatment also is similar. In this variant, single elements pass over each other in a 3/3 interval. Shifts include examples of 3/1/3, 3/2/3, 3/4/3, 3/5/3, 3/6/3, 3/5/2/3, 3/2/3/1/3, 3/2/1/2/3 and 3/2/3/1/1/2/3 intervals. In five cases, one or more of these shifts is regularly employed to produce patterns on the bases of the baskets. These patterns include three plain meanders and two plain concentric diamonds (cf. Morris and Burgh 1942: Fig. 10 e, f, g). In three cases, the ring is *Rhus* sp. with cortex and in two cases *Salix* sp. with cortex. The wooden ring is missing in the remaining specimen. Selvage treatment on five specimens is as described for Type XXI ring baskets. The selvage is folded to the outer surface on three specimens and folded to the interior surface on three specimens. In four specimens, the folded selvage is secured by a single circuit of simple 2-ply twining with unspun wefts. Two of these circuits are S-twist and two are Z-twist. The sel-

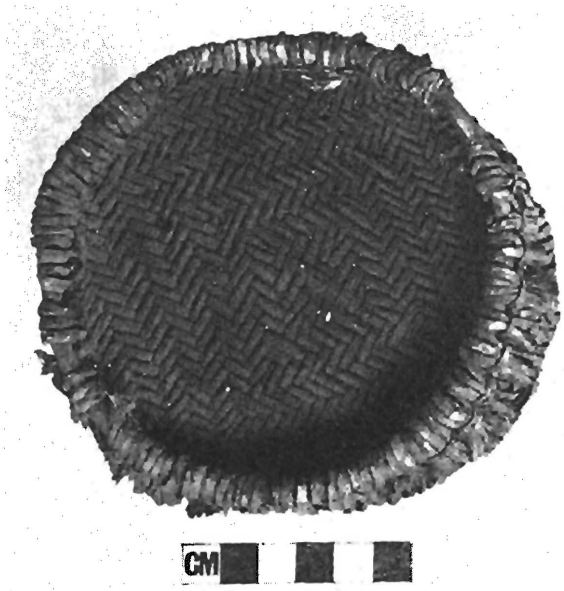


Figure 192. Complete Type XXII (180° self selvage) ring basket with plain concentric diamond design; twill plaiting, 3/3 interval; concave surface.

Figure 194. Type XXII (180° self selvage) ring basket fragment with plain meander design; concave surface.

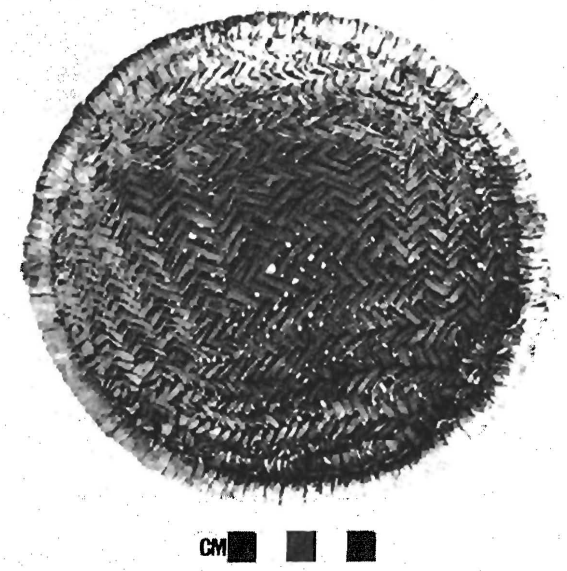


Figure 193. Complete Type XXII (180° self selvage) ring basket with plain concentric diamond design; concave surface.

vage of one specimen is secured with a simple twining circuit of 2-ply Z-spun S-twist cordage wefts. Two to four elements are engaged at each weft crossing. Weft rows are terminated by tucking the exhausted wefts under the initial weft crossing. The selvage of the sixth specimen is a somewhat unusual variant of the 180° type: terminal elements are folded to the exterior of the basket at a 180° angle and secured in groups of three by a single circuit of simple 2-ply S-twist twining with S-spun Z-twist cordage wefts. While two of the terminal elements in each group are clipped after binding, the third element is plaited with the corresponding element in the adjacent set in a 1/2 interval. After two such intervals, the elements are folded 140° toward the rim and plaited for two more 1/2 intervals. The elements are then clipped about 2 mm below the wooden ring. The net result is a 180° self selvage which is finished with a 90° self selvage, presumably for decorative effect. The sample includes four shallow bowls and two shallow trays. All specimens are unmended, unpitched and not naturally watertight. Three specimens exhibit moderate wear on both surfaces and one specimen has moderate to heavy wear on the interior surface only. One of the worn specimens also is stained. Two specimens exhibit no wear.

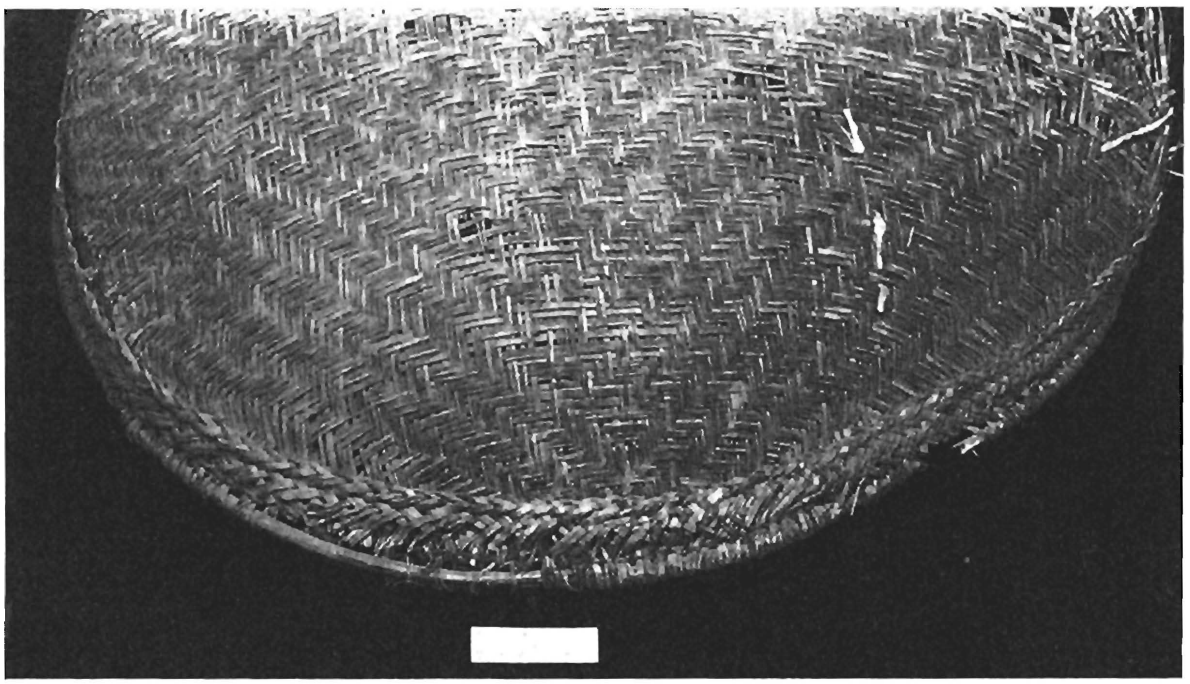


Figure 195. Type XXII (180° self selvage) ring basket fragment; convex surface. Note combination of 180° and 90° selvages.

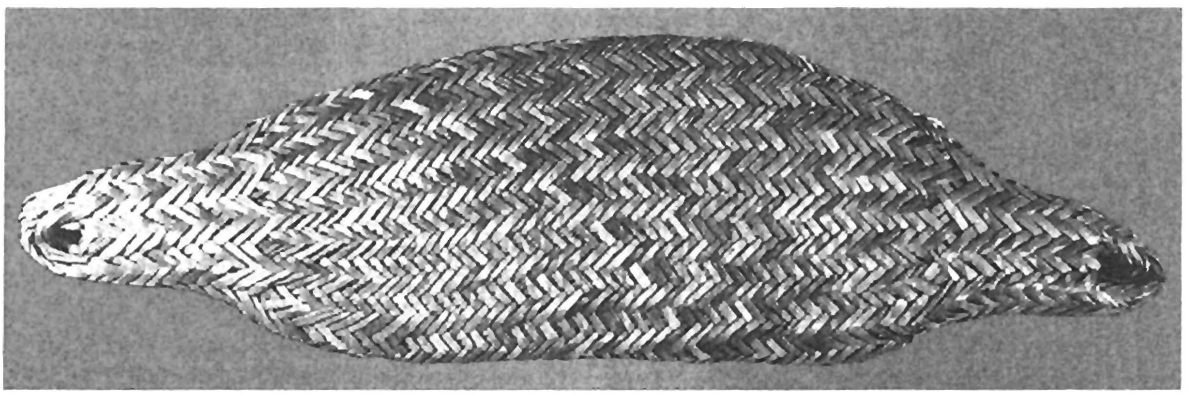


Figure 196. Complete Type XXII (continuous selvage) tumpline; convex surface.

Measurements (all specimens): Range in diameter of plaiting elements, 2.8–8.7 mm; mean diameter of plaiting elements, 4.9 mm; range in angle of crossing of plaiting elements, 90°–110°; mean angle of crossing of plaiting elements, 96.8°; range in diameter of ring, 5–16 mm; mean diameter of ring, 9.24 mm; range in diameter of binding circuit, 2–3.1 mm; mean diameter of binding circuit, 2.53 mm; range in number of elements bound at each weft crossing, 2–4; mean number of elements bound at each weft crossing, 2.6.

Measurements (individual specimens): Container 1—maximum diameter of rim, 298 mm; maximum depth, 100 mm. Container 2—maximum diameter of rim, 160 mm; maximum depth, 70mm. Container 3—maximum diameter of rim, 150 mm; maximum depth, 70 mm. Container 4—maximum diameter or rim, 110 mm; maximum depth, 30 mm. Container 5—maximum diameter of rim, 110 mm; maximum depth, 20 mm. Container 6—maximum diameter of rim, 440 mm; maximum depth, 50 mm.

Type XXII (continuous selvage): Twill Plaiting, 3/3 Interval (Fig. 196)
Form: Tumpline.
Number of specimens: 1.
Type of specimen: Complete.

Technique and Comments: The complete Type XXII tumpline is at once the finest representative of its form group recovered at Antelope House and one of the finest ever recovered in the Greater American Southwest. Unlike the Type XXI tumpline, which is composed of multiple plaited segments, the Type XXII specimen is a one-piece construction. The method of manufacture is somewhat analagous to the Types XXI and XXII truncated cylinder pot rests. The body of the tumpline is a flattened cylinder produced by continuous radial plaiting with single elements in a basic 2/2 interval. Shifts include examples of 3/1/3 and 3/2/3 intervals. The 3/1/3 intervals are employed exclusively toward both ends of the specimen in order to reduce its overall width. The end loops are produced by folding terminal elements at a 180° angle into the interior of the tumpline. These elements are intentionally left quite long to provide additional mass, or padding, to the interior of the tumpline. The specimen is undecorated, unmended, unpitched and not naturally watertight. Wear patterns are restricted to very slight wear on the margins of the body of the tumpline. Slight staining is apparent on limited portions of the convex, or exterior, surface.

Measurements: Mean diameter of plaiting elements, 4.5 mm; mean angle of crossing of plaiting elements, 95°; maximum interior diameter of end loops, 12.4 mm; length, 5.36 mm; width, 142 mm; thickness (at midpoint of body), 19.8 mm.

Type XXIII (90° self selvage): Twill Plaiting, 4/4 Interval
Form: Matting.
Number of specimens: 1.
Type of specimens: Fragment.

Technique and Comments: Single elements pass over each other in a 4/4 interval. No shifts are present. Selvage on one extant margin has terminal elements folded back at a 90° angle and replaited into the body of the mat. Selvage on the other extant margin has alternate elements folded to opposite sides of the mat, producing a double 90° edge. The specimen is undecorated, unpitched, unmended and not naturally watertight. Heavy wear is present on both surfaces.

Measurements: Mean diameter of plaiting elements, 5 mm; mean angle of crossing of plaiting elements, 90°.

Type XXIII (180° self selvage): Twill Plaiting, 4/4 Interval
Form: Ring basket.
Number of specimens: 1.
Type of specimen: Complete.

Technique and Comments: With the exception of interval, ring baskets of this type are identical in basic configuration and construction to Types XXI and XXII ring baskets. Selvage treatment also is similar. In this variant, single elements pass over each other in a 4/4 interval. Shifts include examples of 4/1/4, 4/2/4, 4/3/4, 4/6/4, 4/7/4, 4/8/4, 4/3/5/4/2/4 and 4/2/1/2/1/2/4 intervals. Standard 4/4 intervals predominate in the center of the basket, while 4/3/4 and 4/2/4 shifts are most common on the walls and near the rim, respectively. Shifts are principally employed in the production of a plain meander design on the center of the basket (cf. Morris and Burgh 1942: Fig. 10f, g). The ring of this specimen is *Salix* sp. with cortex. Selvage treatment has terminal elements folded at a 180° angle to the exterior of the basket. The ends of these elements are secured by a single circuit of simple 2-ply unspun S-twist twining, which engages two plaiting elements at each weft crossing. The twining circuit is terminated by tucking the exhausted wefts under the initial weft crossing. The specimen apparently is a shallow bowl and is unmended, unpitched and not naturally watertight. Moderate to heavy wear is present on both surfaces. The specimen is badly distorted through use or the circumstances of interment and the exterior surface is reddened, presumably by fire.

Measurements: Range in diameter of plaiting elements 1.9–5.5 mm; mean diameter of plaiting elements, 3.7 mm; mean angle of crossing of plaiting elements, 90°; mean diameter of ring, 9 mm; mean diameter of binding circuit, 3 mm; mean number of elements bound at each weft crossing, 2; maximum diameter of rim, 370 mm; maximum depth, N.A. (specimen is distorted).

Miscellaneous Fiber Constructions

The 42 specimens herein labeled miscellaneous fiber constructions are allocated to 11 more or less arbitrary categories, which are described below without numerical prefixes. Table 144 shows the distribution of miscellaneous constructions by category, raw material, period and provenience.

Plaiting: Variable Interval (Fig. 197)
Form: Perforated handle(?).
Number of specimens: 1.
Type of specimen: Complete.

Technique and Comments: This specimen is composed of a single *Yucca angustissima* stalk, which is bifurcated for some one-half of its length. Each half segment is further subdivided into five sections, which constitute the basic plaiting elements. The five elements of each section are more or less randomly plaited in 1/1, 1/2 and 2/2 intervals and possess very irregular 90° self type side selvages. The half segments are jointed to form a loop, or aperture, by knitting the loose ends of the plaiting elements with a series of six square knots. The lower limit of the initial bifurcation is reinforced with an overhand knot. The specimen is undecorated and unmended. Wear patterns are restricted to slight charring on one surface. The function of this unique specimen is unknown, although its general configuration suggests that it may represent a handle of some sort.

Measurements: Range in diameter of plaiting elements, 1.6–4.5 mm; mean diameter of plaiting elements, 3.05 mm; mean angle of crossing of plaiting elements, 77°; maximum interior diameter of loop, 55 mm; minimum interior diameter of loop, 35 mm; length 109 mm; maximum width, 25 mm.

Plaiting: Unknown Interval
Form: Matting.
Number of specimens: 2.
Type of specimens: Fragments.
Number of individual mats represented: 2.

Technique and Comments: Single elements pass over each other in an unknown interval. The presence or absence of shifts is not discernible. The configuration of the plaiting elements suggests selvage treatment may have been of the 90° self type. The specimens are undecorated, unmended, unpitched and not naturally watertight. Both specimens exhibit heavy wear and are disintegrating.

Measurements: Mean diameter of plaiting elements, 6 mm; mean angle of crossing of plaiting elements, N.A.

Plaiting: Unknown Interval
Form: Plaited band.
Number of specimens: 1.
Type of specimens: Fragments.

Technique and Comments: Single elements pass over each other in an unknown interval. The original number of elements, as well as the presence or absence of shifts, is not discernible. The configuration of the plaiting elements suggests side selvage was of the 90° self type, while end selvage may have been of the 180° self type. The specimen exhibits heavy wear and is disintegrating.

Measurements: Mean diameter of plaiting elements, 7 mm; mean angle of crossing of plaiting elements, N.A.; width, 27.8 mm.

Plaiting: Unknown Interval
Form: Ring baskets.
Number of specimens: 2.

Technique and Comments: Single elements pass over each other in an unknown interval. The presence or absence of shifts is not discernible. The ring is decorticated *Salix* sp. in one specimen and is absent in the other. Selvage treatment of the specimen with the ring has terminal elements folded at a 180° angle to the exterior of the basket. The elements are secured by a single circuit of simple 2-ply unspun S-twist twining. The method of terminating the twining is unknown. Both specimens are undecorated, unmended, unpitched and not naturally watertight. Vessel configuration is not discernible. Both specimens exhibit heavy wear on all surfaces and are disintegrating. One is stained and the other has a human coprolite and husk of *Zea mays* adhering to one surface.

Measurements: Range in diameter of plaiting elements, 6–8 mm; mean diameter of plaiting

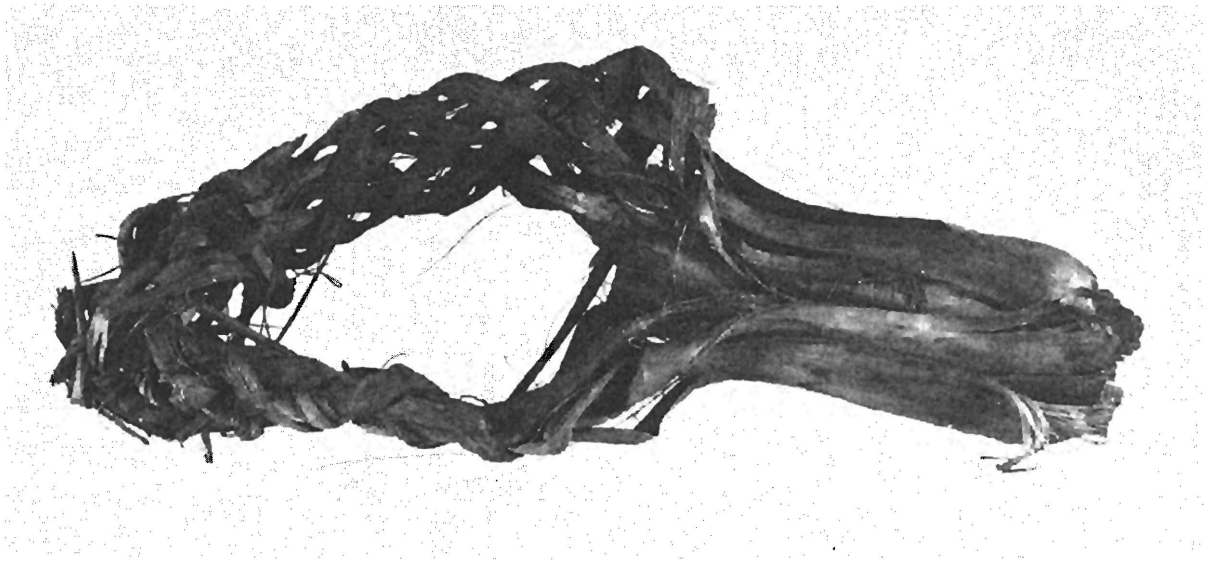


Figure 197. Complete perforated handle (?) of variable interval plaiting.

elements, 7 mm; mean diameter of ring, 9 mm; mean number of elements bound at each weft crossing, 3.

Plaiting: Unknown Interval
Form: Open weave bag.
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: A series of single elements is loosely and irregularly plaited together in no particular pattern or interval. The plaiting is so loose that a circuit of single-ply unspun *Yucca baccata* cordage (mean diameter, 2.7 mm) is employed to bind or reinforce the plaiting elements. The cordage is irregularly looped around the plaiting elements and is initiated and terminated with square knots. There is no selvage. The specimen is undecorated, unmended and not naturally watertight. Heavy wear is present on the outer surface and a lump of *Pinus* sp. resin adheres to the concave surface of the bag.

Measurements: Range in diameter of plaiting elements, 6.1–19.3 mm; mean diameter of plaiting elements, 12.7 mm; mean angle of crossing of plaiting elements, 80°.

Flat Plaited Rectangles
Number of specimens: 3
Type of specimens: Complete.

Technique and Comments: Two varieties of flat plaited rectangles are represented at Antelope House. In the sole example of the first variety, two single elements are crossed at right angles and irregularly bound at their juncture with a circuit of single-ply unspun *Yucca angustissima* cordage (mean diameter, 2.35 mm). The cordage is terminated with a square knot. Each element is then folded back on itself at a 180° angle and plaited for one 1/1 interval. In the second variety, four single or, in one case, double elements are plaited for one 1/1 interval. Each element is then folded back on itself at a 180° angle and plaited for another 1/1 interval. All rectangles are undecorated, unmended, unpitched and not naturally watertight. All specimens have moderate to heavy wear on both surfaces. The function of these rectangles is unknown.

Measurements: Range in diameter of plaiting elements, 3.5–14.60 mm; mean diameter of plaiting elements, 7.1 mm; mean angle of crossing of plaiting elements, 90°; range in length, 17–130 mm; mean length, 77.5 mm; range in width, 15–95 mm; mean width, 63.5 mm.

Table 144. Distribution of fiber constructions by category, raw material, period and provenience.

Key
The first Arabic numeral indicates miscellaneous category; the set of letters designates raw materials; the second Arabic numeral represents number of specimens.

Categories
1. Plaiting: Variable Interval
2. Plaiting: Unknown Interval
3. Flat Plaited Rectangles
4. Zigzag Doodles
5. Patches
6. Fiber Wrapped Twig Construction
7. Hoops: Figure Eight Stitch
8. Figure Eight Doodle
9. Fiber Wrapped Rod
10. Latticework Constructions
11. Construction Material

	South Area		*South Room Block*											
	South Plaza	*South Plaza Floor 1*	*Tower Corridor*	*Tower Corridor Floor 3*	*Room 1*	*Room 2*	*Room 21*	*Room 21 Pit*	*Room 21 Floor 2*	*Room 21 Floor 3*	*Room 23*	*Room 29 Floor 3*	*Room 30*	*Room 30 Floor 1*
BMIII														
PI														
PII							11-PY-1							
EPIII	10-SYb-1					2-Ya-1					11-Yb-1			
MPIII		3-Ya-1						7-SS-1					4-Zm-1	
LPIII		7-SS-1	2-Yb-1 7-SS-1	10-SYb-1	2-S-1 5-Yb-1	11-T-1			1-Ya-1 2-Yb-1 3-Yb-1	7-SS-1	5-Yb-1 7-SS-1	11-PYb-1 11-SYa-1		7-RS-1
Navajo	4-Zm-1													
Unknown	6-RRYb-1													
TOTALS	3	2	2	1	2	2	1	1	3	1	3	2	1	1

Central Room Block					*North Room Block*						*North Area*	
Kiva B	*Kiva B Annex Floor 1*	*Room 36 Floor 5*	*Room 42*	*Room 50 Floor 1*	*Room 5*	*Room 16*	*Room 18*	*Room 18 Floor 2*	*Room 41 Floor 2*	*North Terrace*		Totals
												0
										2-S-1		1
												1
8-R-1												4
												3
9-S-1 2-Yb-1	7-SS-1	7-SS-2	7-SS-1	11-PYb-1			11-SYb-1		7-SS-1	3-Yb-1 11-Ya-1	7-SS-1	28
					7-SS-1			7-RS-1				3
						7-SYb-1						2
3	1	2	1	1	1	1	1	1	1	3	1	42

Figure 198. Zigzag doodle.

Zigzag Doodles (Fig. 198)
Number of specimens: 2.
Type of specimens: Complete(?), 1; fragment, 1.
Number of individual doodles represented: 2.

Technique and Comments: These constructions are the products of a multistep folding and twisting process. Initially, a single element is folded back on itself at a 180° angle. One end of this folded element is then folded at a 90° angle and twisted in a counterclockwise direction. The other end is similarly folded and twisted in a clockwise direction *over* the initial 90° fold. At this point, a second single element of the same length as the first is inserted into the loop formed by the initial 180° fold and the 90° folding and twisting process is repeated in both ends of the second element. The loose ends of the first folding and twisting series are secured by the second and so on until the construction is complete. These specimens are undecorated, unmended, unpitched and not naturally watertight. There are no wear patterns. The function of these specimens is unknown.

Measurements: Range in width of elements, 23.3–35 mm; mean width of elements, 29.15 mm; range in length, 38.2–145 mm; mean length, 97.6 mm.

Patches
Number of specimens: 2.
Type of specimens: Complete(?).
Number of individual patches represented: 2.

Technique and Comments: Both of these somewhat amorphous items appear to be mends or patches for plaited baskets. The first is a single unspun untwisted element, irregularly wrapped by two similar elements and secured with two square knots. The second is a segment of twill plaiting with single elements in a 2/2 interval. There is no selvage. "Warps," or bunches of three to four *Yucca baccata* leaves, have been added to one surface of the plaiting by several irregular circuits of simple 2-ply unspun S- and Z-twist twining. One of the twining circuits is terminated with a square knot. Both specimens are undecorated, unpitched and not naturally watertight. These patches may have been used to reinforce tears or to fill holes in heavily worn containers.

Measurements: Patch 1—range in diameter of plaiting elements, 2.5–8 mm; mean diameter of plaiting elements, 5.25 mm; length, 40 mm; width, 30 mm. Patch 2—range in diameter of plaiting elements, 2.8–5 mm; mean diameter of plaiting elements, 3.9 mm; mean angle of cross-

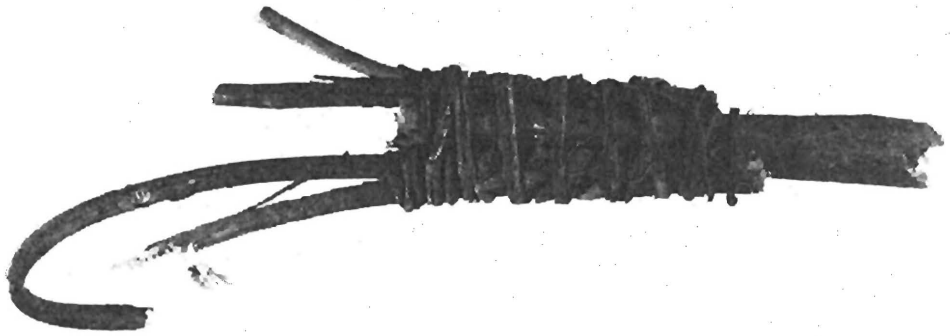


Figure 199. Fiber-wrapped twing construction.

ing of plaiting elements, 90°; mean diameter of warps, 9.1 mm; mean diameter of wefts, 2.7 mm; mean gap between weft rows, 0; warps per centimeter, 1; wefts per centimeter, 4; length, 55 mm; width, 35 mm.

Fiber-Wrapped Twig Construction (Fig. 199)
Number of specimens: 1
Type of specimen: Fragment.

Technique and Comments: Two decorticated *Rhus* sp. twigs are bent back onto themselves at a 180° angle to form loops. Each loop is then bound at the open end, or base, with multiple circuits of single-ply unspun *Yucca baccata* cordage (mean diameter, 1.6 mm). One twig loop is wrapped with five circuits of cordage and the other is wrapped with seven. In both cases, wrapping direction is left to right. These two constructions are in turn affixed to opposite sides of one end of a decorticated *Rhus* sp. rod by another series of single-ply unspun *Yucca baccata* wrapping stitches (mean diameter, 1 mm). There are eight circuits of wrapping stitches and the work direction is left to right. The twig loops are arranged parallel to the central rod and the closed ends of the loops extend beyond the ends of the rod. The specimen is undecorated, and unmended. Heavy wear is present on all surfaces and both twig loops, as well as the central rod, are fractured.

Measurements: Mean diameter of central rod, 6.2 mm; mean diameter of loop twigs, 15.5 mm; length of extant construction, 75.9 mm.

Hoops: Figure-8 Stitch (Fig. 200, 201)
Number of specimens: 15.
Type of specimens: Complete, 1; fragments, 14.
Number of individual hoops represented: 14.

Technique and Comments: A stacked foundation, consisting of two whole, decorticated rods or, in one case, a decorticated rod and a *Yucca baccata* fiber bundle, is sewn with figure-8 wrapping stitches. The rods are formed into closed circular to oval hoops and the stitching completely circumscribes the foundation. There is a gap between the stitches exposing the rods. Work direction includes seven examples of left to right wrapping and one each of right to left and mixed wrapping. Six specimens are too fragmentary to discern wrapping direction. New stitches are added by simply encircling the foundation one to four times before initiating the figure-8 stitch pattern. On one specimen, a coiling splice is used in which the exhausted stitch is clipped short and the end of the new stitch is bound under. All specimens are undecorated, unmended, unpitched and not naturally watertight. All specimens exhibit moderate to heavy wear and five are worn to the point of disintegration. These hoops may have functioned as rims on some sort of container or as cradle supports (cf. Hough 1919: Pl. 25, 2; Pl. 49, 4).

Measurements: Range in diameter of rods, 1.75–5.30 mm; mean diameter of rods, 3.63 mm; range in width of stitches, 1.4–3.25 mm; mean width of stitches, 2.23 mm; range in gap between stitches, 0–6.75 mm; mean gap between stitches,

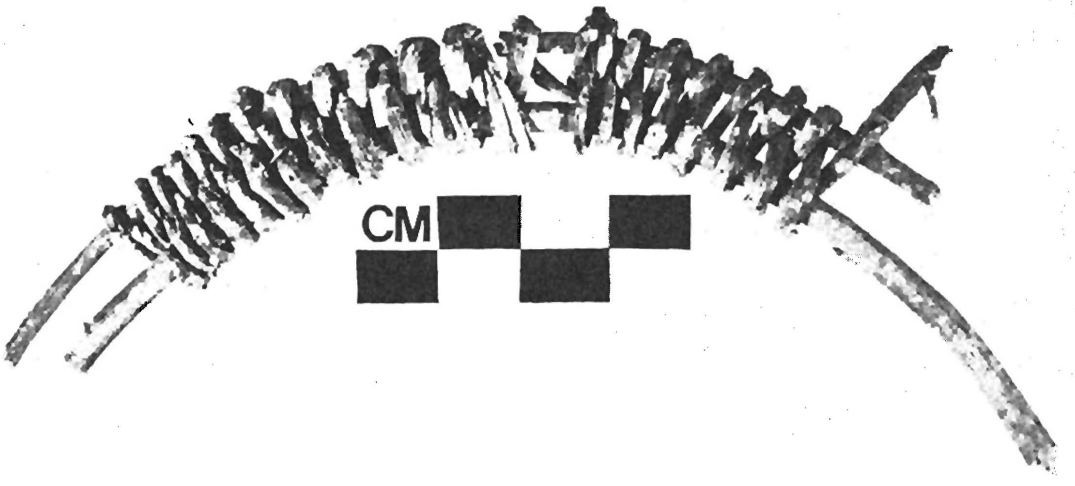


Figure 200. Fragment of hoop, figure-8 stitch.

Figure 201. Fragment of hoop, figure-8 stitch.

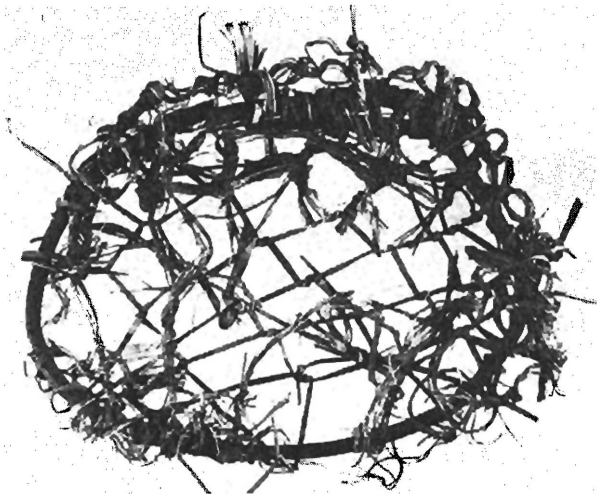


Figure 202. Complete latticework construction; Specimen 1, concave surface.

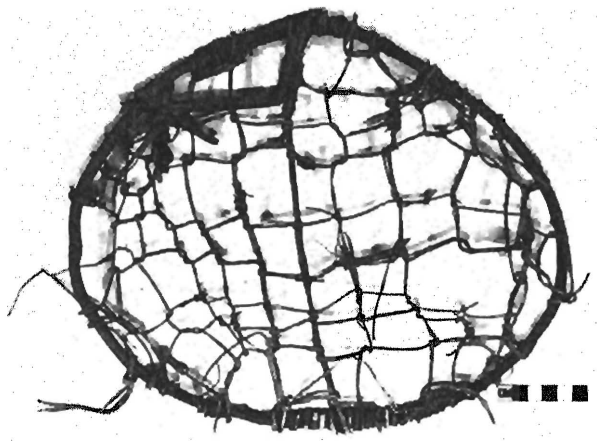


Figure 203. Complete latticework construction, Specimen 2, concave surface.

1.93 mm; range in stitches per centimeter, 2–5; mean stitches per centimeter, 3; maximum diameter (complete specimen), 80 mm.

Figure-8 Doodle
Number of specimens: 1.
Type of specimen: Complete(?).

Technique and Comments: Two decorticated *Rhus* sp. elements are X-crossed and the ends of each element are linked by figure-8 *Rhus* sp. stitches. Work direction alternates from clockwise to counterclockwise and there are two complete circuits of stitches. The specimen is undecorated and unmended. There are no wear patterns. The function of this construction is unknown.

Measuremnts: Mean diameter of elements, 3 mm; length, 45 mm; width, 33 mm.

Fiber-Wrapped Rod
Number of specimens: 1.
Type of specimen: Fragment.

Technique and Comments: A tapered, decorticated, bilaterally split rod is wrapped on its narrow end with two lengths of single-ply unspun cordage. Both lengths of cordage lie parallel to the rod and each engages the same end with a single complete wrapping circuit. The specimen is unmended and undecorated. Its function is unknown.

Measurements: Mean diameter of rod, 11.35 mm; mean width of stitches, 2.62 mm.

Latticework Constructions (Fig. 202, 203)
Number of specimens: 2.
Type of specimens: Complete(?).

Technique and Comments: A foundation consisting of one or two whole rods is bent into an oval hoop or ring and is used to support an open weave, latticework center. In the first specimen, the hoop is a single, partially decorticated *Salix* sp. rod, which is secured at the point of juncture, or overlap, by eight circuits of single-ply unspun wrapping stitches. Work direction on the first four wrapping circuits is left to right and is reversed on the second set of four. Both ends of the wrapping stitch are secured by a single square knot. The latticework of the first specimen is constructed of a single-ply unspun "continuous" element, which initially makes a series of traverses across the maximum diameter of the hoop at about 1.6 cm intervals. The element wraps the foundation on the end of each circuit. After the initial set of circuits is complete, the element is then drawn across them at right angles, engaging each preexisting circuit with a wrapping stitch. After each complete crossing, the element wraps the hoop before initiating another circuit. This process produces an irregular diamond-shaped lattice. The continuity of the

active weaving element is maintained by splicing with square and figure-8 knots. At five points along the hoop of this specimen, single-ply unspun *Yucca baccata* elements have been affixed with double half-hitches. A length of single-ply unspun *Yucca baccata* cordage (mean diameter, 1.47 mm) circumscribes the entire hoop and is bound to it by the latticework.

The hoop of the second specimen is composed of *Salix* sp. rods with cortex, the junctures of which are bound with 15 and 21 circuits of single-ply unspun wrapping stitches, respectively. Direction of wrapping is right to left and the ends of the stitches are bound under. The latticework of this specimen is constructed of single-ply unspun elements, as is that of the first, but the method of manufacture differs somewhat. A "continuous" single-ply unspun element initially forms a rough hexagram by systematically engaging a series of points along the interior of the hoop. The active end of this element then bisects the hoop and is secured with a square knot to the foundation. A second single-ply unspun element is attached to the initial element near the point of bisection of the hoop. This element then wraps the foundation and proceeds in a counterclockwise direction, engaging with a wrapping stitch all traverses of the initial element. After each series of engagements, the second element wraps the foundation, creating a series of loose clove hitches. This process is repeated until the diamond-shaped lattice is complete. New elements are added to the lattice by splicing with square knots. Along the edge of the hoop, a single-ply unspun element has been suspended in a series of overhand nooses at intervals of 5 to 9 cm. This noose construction, which originally circumscribed the rim, apparently was affixed to other, now missing, elements. Yet another enigmatic element is bound to the hoop. This construction is composed to two unspun *Yucca baccata* fibers, which are wrapped by a third such fiber and secured to the rim by a pseudoslip knot. While only one such structure is extant, there may have been a series of them spaced along the hoop.

Both latticework constructions are undecorated. The lattices of both are mended with numerous square knots. Light to moderate wear is pronounced in the hoops and lattice "centers" of these constructions. While these items could represent open weave trays, it is more likely that they are "bottoms" of some variety of collapsible container.

Measurements: Specimen 1—mean diameter of foundation, 6.90 mm; range in diameter of latticework elements, 1.65–3 mm; mean diameter of latticework elements, 2.32 mm; maximum diameter of hoop, 160 mm. Specimen 2—range in diameter of foundation, 7.8–9.15 mm; mean diameter of foundation, 8.57 mm; range in diameter of latticework elements, 2.3–2.75 mm; mean diameter of latticework elements, 2.52 mm; maximum diameter of hoop, 336 mm.

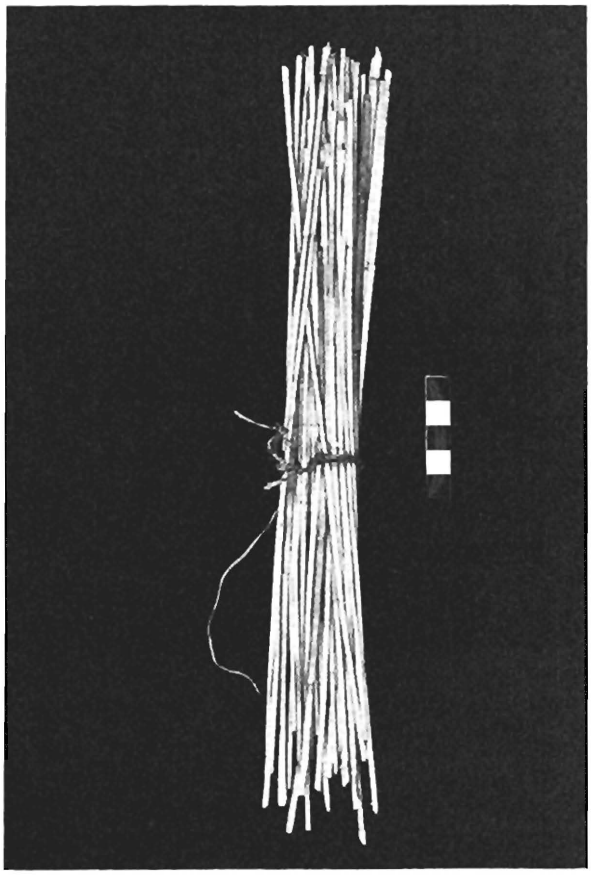


Figure 204. Construction material; **Phragmites** *sp. mat "package" bound with cordage.*

Construction Material (Fig. 204)
Number of specimens: 8.

Technique and Comments: Included here is a variety of materials apparently used in the con-

struction of one or another type of basketry. The sample includes one bunch of pitched *Yucca baccata* elements; one length of split *Yucca angustissima;* one bunch of *Y. baccata* and *Salix* sp. elements; one bunch of mixed *Yucca angustissima* and *Scirpus* sp. elements; one bunch of *Phragmites* sp. rods and *Yucca baccata* elements; one bunch of *Typha* sp. leaves; and two packages of *Phragmites* sp. rods bound with cordage. The first of these packages contains five bunches of rods numbering 5, 5, 6, 7 and 17 specimens, respectively. A continuous length of 2-ply unspun *Yucca baccata* cordage engages each group of rods in succession with a double overhand knot. The second package has four bunches of rods numbering 1, 1, 1 and 2 specimens, respectively. These rods are bound with 2-ply Z-spun S-twist cordage wefts. Twining is initiated on this package with a continuous weft selvage and is terminated with a double overhand knot.

Measurements (fiber bundles and individual elements): None taken.

Measurements: Package 1—range in length of rods, 270–305 mm; mean length of rods, 292.5 mm; range in diameter of rods, 2.9–4.1 mm; mean diameter of rods, 3.45 mm; mean diameter of cordage, 2.45 mm. Package 2—range in length of rods, 250–320 mm; mean length of rods, 301 mm; mean diameter of rods, 5.13 mm; mean diameter of wefts, 4.75 mm.

Internal Correlation

A synopsis and assessment of the results of our analysis are presented below by basketry subclass or residual category.

Twining

Twining, represented by five structural types, accounts for some 5.03 percent of the Antelope House basketry sample. Each twining specimen apparently represents a separate vessel or receptacle. The distribution and frequency of twining types is presented in Table 136 by raw material, period and provenience.

Technology

Of the five twining types represented at Antelope House, four are simple twining variants and one is diagonal. Collectively, simple twining varieties account for 96.77 percent of the twining sample, with the single diagonal type accounting for the remaining 3.23 percent. Of the four simple twining types, Type IV (Open Simple Twining, S-Twist Weft) is the most common, representing 77.41 percent of the total twining assemblage. The remaining simple twining types are numerically insignificant.

Warps. Ninety percent of the warps in the simple twining types are unspun elements; the example of diagonal twining also has unspun warps. Simple twining warps are single elements in 11 cases and multiple elements functioning as a single warp unit in 16. The multiple element warp units include two examples of doubled, eight examples of trebled and six examples of quadrupled warps. The example of diagonal twining has single element warps. The three Type II (Close Simple Twining, S-Twist Weft) sandal fragments (which technically are not basketry) provide the only examples of spun warps in the Antelope House sample. These warps are 2-ply Z-spun S-twist cordage.

Method of Starting. Most of the Antelope House twining specimens are fragmentary portions of matting, making it difficult to determine the exact method of starting. The few specimens with selvage suggest that twining was begun at one corner of the mat and proceeded, either in discrete noncontinuous weft courses or in continuous weft courses, to the opposite end of the mat. A similar method is inferred for the sandal fragments. The Type I (Close Simple Twining, Z-Twist Weft) petate has a true center, produced by radial twining on crossed warps. The Type IV (Open Simple Twining, S-Twist Weft) bag has no center, as it is composed of a single *Yucca* sp. stalk.

Selvages. Few twined specimens with selvage were recovered from Antelope House, and the sample may not be representative of the full repertoire of finishing techniques used at the site. End selvages include three examples of 180° warp folds followed by truncation; one example of warp truncation without folding; one example of three-element braid produced by folding and plaiting terminal warp elements in a 1/1 interval; and one example of a twilled rim, in which terminal warps are folded and plaited in a 2/2 interval. There is still less variety in the side selvages, which include three examples of continuous wefts and three examples of termination by overhand knot.

Splices. Only one splice is present. A Type II (Close Simple Twining, S-Twist Weft) sandal fragment has new wefts inserted by an overhand knot splice with the exhausted weft course. This splicing technique probably was also the standard method of introducing new wefts in all forms of twined matting.

Mending and decoration. None of the twining specimens are decorated and only one is mended. The frayed wefts of a Type III (Open Simple Twining, Z-Twist Weft) mat may have been secured or reinforced with square and double overhand knots. The lack of mending in the twining assemblage also is found in the other subclasses of basketry.

Form and Function. All mats appear to have been rectangular in plan, with no obvious top or bottom side. Moderate to heavy wear on one or both surfaces attests the extensive use of these specimens, either as floor coverings or as "flattened receptacles," upon which a variety of items may have been temporarily placed or stored. The presence of wear on only one surface of several mats strongly suggests that these items were not turned over until they had been heavily worn on one side. This premise is reinforced by several specimens which are heavily worn on one surface and lightly to moderately worn on the other. The general scarcity of any other twining forms at Antelope House may be directly related to the great popularity of plaiting and, to a lesser extent, coiling as the preferred basketry constructions. As might be expected in an assemblage dominated by matting, virtually all specimens are semiflexible to flexible and no specimens are pitched or naturally watertight.

Raw Materials: Five plant genera were employed in the production of twined basketry at Antelope House. Warps are made of *Scirpus* or, in descending order of preference, of *Typha, Yucca, Salix* or *Phragmites.* Method of preparation of *Scirpus* and *Typha* matting warp elements was restricted to immersion in water and occasional longitudinal splitting of the leaves to maintain uniform size. *Yucca, Salix* and *Phragmites* matting warps also were immersed, but are otherwise unmodified. *Yucca* cordage sandal warps were immersed, retted and spun, while *Yucca* petate and bag warps were immersed and longitudinally split to maintain uniformity of width. Wefts generally are made of *Yucca* (usually *angustissima*); *Scirpus* and *Typha* also were used. *Yucca* cordage wefts were immersed, retted and spun; all other *Yucca* wefts were immersed, but were otherwise unmodified. *Scirpus* and *Typha* wefts were immersed and occasionally were split longitudinally, but are otherwise unaltered.

Chronology

As Table 136 shows, twining is continuously represented at Antelope House from PI through Late PIII occupations, but it is a minority subclass, contributing scarcely more than 1 percent of the total basketry assemblage during any one period. The greatest relative incidence of twining is during Late PIII, when it accounts for but 1.1 percent of the total basketry sample. The earliest twining type at Antelope House is a single specimen of Type III (Open Simple Twining, Z-Twist Weft) ascribable to the PI occupation. This type recurs only once, in Late PIII. The next twining types to appear are II (Close Simple Twining, S-Twist Weft) and IV (Open Simple Twining, S-Twist Weft) in PII. Type V (Open Diagonal Twining, S-Twist Weft) is restricted to Early PIII. The only example of Type I (Close Simple Twining, Z-Twist Weft) is of unknown age. Over one-third (35.5 percent) of the total twining assemblage is of unknown or mixed age.

Warps. Multiple element unspun warps appear during PI and persist as the favored warp manipulation through Late PIII. Single element unspun warps first occur during Middle PIII and continue through Late PIII. Two-ply S-spun Z-twist cordage warps are restricted to PII and Middle PIII.

Wefts. Two-ply S-spun Z-twist cordage wefts, ascribable to the PI occupation, are the earliest at Antelope House. This weft manipulation recurs only once, in Late PIII. Two-ply Z-spun S-twist wefts appear in PII and constitute the principal weft medium through Late PIII. Unspun S-twist wefts are restricted to Middle PIII; unspun Z-twist wefts are of unknown age.

Selvages. Little information is available on the sequence of selvage treatments at Antelope House. Simple truncation, three-element braid and 2/2 twill are of unknown age. The only other extant end selvage, the 180° secured fold, is restricted to single occurences in PI, Middle PIII and Late PIII. Still fewer chronological data are available on side selvages. Overhand knot weft terminations occur only in Late PIII and continuous wefts are limited to PII. In light of the above, any con-

clusions as to the twining selvage sequence at Antelope House would be premature.

Form and Function. Matting, the predominant twining form at Antelope House, first appears in PI and persists throughout the remainder of the sequence. Non-matting forms occur sporadically from PII to Middle PIII.

Raw Materials. No particular trends are evident in the use of raw materials in twining manufacture through time. *Yucca* is employed throughout the Antelope House sequence. Because *Yucca* was used principally in the finely retted state for the production of cordage wefts, identification of species is difficult. It appears, however, that *Yucca angustissima* was employed more extensively than was *Y. baccata*, particularly during Late PIII. *Typha* occurs sporadically from PI through Late PIII and *Scirpus* was used more extensively than was *Y. baccata*, particularly during Late PIII. *Typha* occurs sporadically from PI through Late PIII and *Scirpus* was used extensively from PII to Late PIII, with a hiatus in Middle PIII. The incidence of *Phragmites* is restricted to Early PIII and the only occurrence of *Salix* is of indeterminate age.

Insufficient data are available to delineate the chronology of method of starting, splicing method or mending, and decorating techniques at Antelope House.

Internal Distribution and Relationships

The twining assemblage at Antelope House is differentially distributed. Sixty-four and a half percent of the twining assemblage was recovered from the South Area/South Room Block, 29 percent from the North Room Block/North Area. Only 6.5 percent of the sample is from the Central Room Block. Type IV (Open Simple Twining, S-Twist Weft) is the only twining type with pan-site distribution. Types II (Close Simple Twining, S-Twist Weft) and V (Open Diagonal Twining, S-Twist Weft) occur only in the South Area/South Room Block, and Type I (Close Simple Twining, Z-Twist Weft) is found only in the North Room Block/North Area. Type III (Open Simple Twining, Z-Twist Weft) occurs both in the Central Room Block and in the North Room Block/North Area.

PI twining is restricted to the North Room Block/North Area, while PII and Early PIII twined materials occur only in the South Area/South Room Block. Twining ascribable to Middle PIII is present in both the South Area/South Room Block and in the North Room Block/North Area. Late PIII twined wares have a pan-site distribution. Twining of unknown age is concentrated in the South Area and in the North Room Block/North Area.

Matting has a pan-site incidence. The non-matting forms are restricted to one or another of the major architectural units.

The major raw materials are more or less evenly distributed across the site. *Yucca* occurs in all architectural units, as do *Scirpus* and *Typha*. The less exploited plant resources, *Phragmites* and *Salix*, are restricted to the South Area and North Room Block, respectively.

The distribution of twining at Antelope House sheds little light on the socio-cultural milieu of the basket makers at the site. Because the sample is far too small and too fragmentary for detailed analysis of idiosyncratic manufacturing variables, examination or delineation of individual basket makers, groups of basket makers or "micro" basket weaving traditions through time is impossible for this segment of the basketry assemblage.

Coiling

Coiling, represented by 14 structural types, accounts for some 12.5 percent of the total Antelope House basketry sample. The 77 coiling specimens represent a minimum of 71 containers. The high ratio of containers to fragments is paralleled in the twining and plaiting assemblages and is somewhat unusual in dry sites from western North America. We are quite certain, however, that the tally is accurate. Special care was taken to match all fragments which could possibly have been portions of the same container, mat, etc., allowing for structural variation of fragments derived from different areas of a basket or other receptacle (e.g., wall, rim or base).

The distribution and frequency of coiling types is presented in Table 137 by raw material, period and provenience.

Technology

Of the 14 coiling types represented at Antelope House, 13 are close coiling variants and one is open coiling. Collectively, close coiling varieties account for 98.7 percent of the total coiling sample and for 98.59 percent of the probable

total of coiled containers. The sole open coiling type constitutes the remaining 1.3 percent and 1.41 percent.

Foundations. For discussion purposes, the close coiling from Antelope House may be lumped into three major categories: "single" rod types and allied variants, stacked foundation types and bunched foundation types. The "single" rod category includes Types VI (Bundle Foundation, Stitch Type Unknown), VII (Whole Rod Foundation, Interlocking Stitch), VIII (Whole Rod Foundation, Non-Interlocking Stitch), IX (Two Rod Horizontal Foundation, Non-Interlocking Stitch), X (Rod with Lateral Bundle Foundation, Non-Interlocking Stitch) and XIX (Open Coiling, Whole Rod Foundation, Intricate Stitch). These types may be lumped together because in all cases a single foundation element or its functional equivalent is employed in the manufacturing process and, more importantly, is manipulated by the weaver in precisely the same fashion.

The stacked foundation category includes Types XI (Two Rod Stacked Foundation, Non-Interlocking Stitch), XII (Whole Rod and Bundle Stacked Foundation, Non-Interlocking Stitch); and XIII (Two Rod and Bundle Stacked Foundation, Non-Interlocking Stitch), all of which employ a vertical arrangement of foundation materials.

The bunched foundation category includes Types XIV (Two Rod and Welt Bunched Foundation, Non-Interlocking Stitch), XV (Three Rod Bunched Foundation, Non-Interlocking Stitch), XVI (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch), XVII (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch) and XVIII (Five Rod Bunched Foundation, Non-Interlocking Stitch). All foundation elements in this category are arranged in a triangular pattern. As a unit, these types account for 53.24 percent of the total coiling sample and for 49.79 percent of the probable total of containers. Within this category, Types XVI and XVII (both of which have identical Two Rod and Bundle Foundations) account for 53.52 percent of the total coiling sample and for 45.07 percent of the containers. The remaining bunched foundation coiling types are numerically insignificant.

The five "single" rod types account for 40.25 percent of the total coiling sample and for 43.71 percent of the probable total of containers. Within this grouping, Type VII is most common, accounting for 33.76 percent of the coiling sample and for 36.61 percent of the containers. The remaining "single" rod types are numerically inconsequential.

The stacked foundation types represent only 5.19 percent of the total coiling sample and 5.63 percent of the containers.

Stitches. Both simple and intricate stitch types are represented at Antelope House. Simple stitch types are by far the most common, accounting for almost 79 percent of both the total coiling assemblage and the probable total of containers. Significantly, only two of the major simple stitch types, interlocking and non-interlocking, are present. Stitches intentionally split on the work, non-work or both surfaces are absent. Non-interlocking stitches predominate over interlocking stitches, both in percentage of the total simple stitch sample (61.66/37.33) and in percentage of simple single stitch containers (59.50/40.50).

Although intentionally split stitches are not present at Antelope House, accidental splitting of the stitch on one or both surfaces is common. Accidental splitting is easily distinguished from intentional splitting by its irregularity and its generally haphazard appearance.

In virtually all of the non-bunched foundation coiling types, stitches wrap, rather than pierce, the foundation, The reverse situation generally prevails in the bunched foundation types, notably in Type XVII. Wrapping stitches occasionally are used in the bunched foundation types as expansion stitches, but double stitches were preferred for this purpose.

Gaps between the stitches, which expose the foundation, are found in most Antelope House coiling types. With the exception of Type XIX, these gaps are generally very narrow and clearly are not intentionally produced.

The sole example of intricate stitches at Antelope House is found in Type XIX.

Centers. Twenty-five complete or fragmentary specimens with starts or centers intact were recovered. Of these, 17 (68 percent) are continuous coil, five (20 percent) are reinforced continuous coil, and three (12 percent) are flattened continuous coil or oval. Two of the 17 continuous coil centers have central apertures. As 100 percent of the centers are one or another variation of continuous coil, it is more than reasonable to assume that this type of start was standard.

Rims. The Antelope House coiling sample includes 15 rim fragments, 11 (73.33 percent) of which are of the self type and two (13.33 percent) of which are false braid in a 2/2 interval. The remainder include one (6.66 percent) variation of the normal self type, in which the interstices between the terminal row of construction stitches have been filled with a circuit of wrapping stitches, and a self rim, the last 61.5 mm of which is finished in 1/1 false braid. The high proportion of self rims to all other types shows this finish to be the most common selvage treatment at Antelope House.

Work Surface. All tray or very shallow bowl fragments from Antelope House are worked on the concave surface; all deeper, steep-sided bowls and carrying baskets are worked on the convex surface. This is standard practice not only among the Anasazi, but also in most other basketmaking populations of North America.

Work Direction. Seventy-one of the specimens, representing 92.2 percent of the total sample and 91.54 percent of the probable total of containers, are worked from right to left; three of the specimens, representing 3.8 percent of the sample and 4.22 percent of the containers, are worked from left to right. Work direction on the remainder of the coiling assemblage is not discernible. The predominance of right-to-left work direction at Antelope House conforms to standard Anasazi practice.

Splices. Splices are one of the most, if not the most, diagnostic attributes in coiled basketry. Because no two individuals ever execute splices in precisely the same fashion, splices potentially have great utility in delineating macro or micro ethnic or social boundaries. At least five different kinds of splices were employed by the basket makers of Antelope House. The distribution of these is presented in Table 145 by coiling type. Also included are several splice combinations in which the manipulation of either the fag end or the moving end is unknown.

The most popular splice at Antelope House (26 occurrences) has both fag and moving ends bound under. It is the sole splicing technique in Types VIII (Whole Rod Foundation, Non-Interlocking Stitch), XI (Two Rod Stacked Foundation, Non-Interlocking Stitch) and XVI (Two Rod and Bundle Bunched Foundation, Interlocking Stitch), and accounts for 66.66 percent and 52 percent of the splices in Types VII (Whole Rod Foundation, Interlocking Stitch) and XVII (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch), respectively. The second most common splice has both fag and moving ends clipped short. This technique is the exclusive splicing method in Type XV (Three Rod Bunched Foundation, Non-Interlocking Stitch) and accounts for 5.5 percent and 21.05 percent of the splices in Types VII and XVII, respectively. The third most common splicing method has fag ends clipped short and moving ends bound under. The technique occurs only in Types VII and XVII, where it accounts for 22.22 percent and 5.26 percent of the respective splice totals. The remaining splice types are restricted to individual occurrences in Types VII and XVII. No splice type is discernible in Types IX (Two Rod Horizontal Foundation, Non-Interlocking Stitch), X (Rod with Lateral Bundle Foundation, Non-Interlocking Stitch), XII (Whole Rod and Bundle Stacked Foundation, Non-Interlocking Stitch), XIV (Two Rod and Welt Bunched Foundation, Non-Interlocking Stitch), XVIII (Five Rod Bunched Foundation, Non-Interlocking Stitch) and XIX (Open Coiling, One Rod Foundation, Intricate Stitch). The greatest variety of splices occurs, as might be expected in Types XVII and VII; all other coiling types with identifiable splices employ a single technique. The high incidence of fag and moving ends bound under appears to be unrelated to foundation type, stitch pattern, vessel form or any other construction attribute and may well be ascribable simply to local tastes.

Mending and Decoration. Very few Antelope House coiling specimens are mended or decorated. Heavily worn adjacent coils in two specimens of Type VII coiling are reinforced with circuits of binding (wrapping) stitches and a new base is spliced with running stitches to the Type XVII ceremonial basket.

Decoration is restricted to Type XVII, where there are two occurrences of geometric designs and one of "geometricized" quadrupeds. These were produced by inserting rows of darker stitches at varying intervals. The quadrupeds also were painted.

Form and Function. The range of coiled vessel forms at Antelope House is limited to five basic configurations: shallow trays, shallow bowls, steep-sided bowls, bifurcated base carrying baskets and bifurcated base ceremonial baskets. The distribution and frequency of these forms is presented by type in Table 146. The dominant vessel

Table 145. Distribution of coiling splices by type.

	Types														
	VI	*VII*	*VIII*	*IX*	*X*	*XI*	*XII*	*XIII*	*XIV*	*XV*	*XVI*	*XVII*	*XVIII*	*XIX*	*Total*
Fag ends bound under, Moving ends bound under		12	1			1					2	10			26
Fag ends clipped short, Moving ends bound under		4										1			5
Fag ends clipped short, Moving ends clipped short		1								1		4			6
Fag ends bound under, Moving ends clipped short												1			1
Fag ends bound under, Moving ends clipped and concealed under stitches												1			1
Fag ends clipped and concealed under stitches, Moving ends unknown		1													1
Fag ends unknown, Moving ends bound under												1			1
Fag ends unknown, Moving ends clipped short and concealed under stitches												1			1
Unknown	1			1	1		1	1	1				1	1	8
Total	1	18	1	1	1	1	1	1	1	1	2	19	1	1	50

Table 146. Distribution of vessel forms by type (counts = individual containers).

Forms In Profile	*VI*	*VII*	*VIII*	*IX*	*X*	*XI*	*XII*	*XIII*	*XIV*	*XV*	*XVI*	*XVII*	*XVIII*	*XIX*	*Total*
Shallow Tray		18	2		1	1	1		1	1		16			41
Steep-Sided Bowl								1				8			9
Shallow Bowl		5									1				6
Bifurcated Base Carrying Basket												1			1
Bifurcated Base Ceremonial Basket												2			2
Unknown	1	3		1		1					1	3	1	1	12
Total	1	26	2	1	1	2	1	1	1	1	2	30	1	1	71

form is the shallow tray, which accounts for 57.75 percent of the probable total of containers. Steep-sided bowls are a distant second in popularity, representing 12.67 percent of the containers. Shallow bowls are third, constituting 8.45 percent of the container sample. The remaining vessel forms collectively account for only 4.23 percent of the probable total of containers. The configuration of 16.9 percent of the coiled containers, including the enigmatic "handles" of Types VII (Whole Rod Foundation, Interlocking Stitch) and XII (Two Rod Stacked Foundation, Non-Interlocking Stitch), is unknown.

The popularity of tray forms is not restricted to a particular coiling type, but reflects a general preference. However, the function (or functions) of most of these trays and of the test of the coiling assemblage is difficult to determine. While a large number of the coiling fragments at Antelope House exhibit wear in varying degrees on one or both surfaces, wear patterns are relatively undiagnostic, indicating only that coiled vessels were heavily used. Most of these patterns are of the abrasion variety, suggesting that various items frequently were placed in and removed from the containers. Of the entire coiling assemblage, only four tray fragments exhibit the charring on the concave surface characteristic of parching trays. No tray or bowl fragments contain the slightest remnant of gruel or porridge. The possibility that coiled baskets were used as cooking containers, therefore, must be discounted.

More than 95 percent of the coiled containers at Antelope House are rigid. Only two semiflexible specimens, one each in Types VI and XII were recovered. Flexible coiled forms are absent.

None of the Antelope House coiled basketry is pitched or caulked, but many types contain reasonably impermeable specimens, which could have served as water vessels. As indicated in the type descriptions, these vessels are watertight by virtue of the extreme tightness of the weave and the close packing of the stitches, as well as the expansion of foundation elements when wet. Potentially impermeable specimens come from Types VII (Whole Rod Foundation, Interlocking Stitch), X (Rod With Lateral Bundle Stacked Foundation, Non-Interlocking Stitch), XIV (Three Rod Bunched Foundation, Non-Interlocking Stitch), XVI (Two Rod and Bundle Bunched Foundation, Interlocking Stitch) and XVII (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch).

Raw Materials. Only three identified genera of raw materials were employed in the manufacture of coiled basketry at Antelope House. Rods and stitches are of *Salix, Rhus* or *Yucca* and bundles always are of *Yucca*. Sixty-seven and one-tenths percent of all rods are of *Salix*, 30.76 percent of *Rhus*. The remaining 2.64 percent includes one example of *Yucca* and one of unknown composition. *Rhus* was the preferred raw material for stitches (57.14 percent), followed by *Salix* (38.96 percent). The remaining 3.9 percent are of *Yucca*.

Rod preparation of Antelope House involved immersion and decortication in 67.10 percent of the sample and immersion alone in the remaining 32.9 percent. Stitches were prepared from presoaked, longitudinally split and bilaterally thinned twigs. Bundles are composed of unspun retted fiber.

Chronology

As Table 137 indicates, coiling is continuously represented at Antelope House from the BMIII through Navajo occupations, but it is a minority subclass, representing from 35.7 percent of the total basketry assemblage in PI to 8.1 percent during Late PIII.

Foundations. The earliest foundation category present at Antelope House is a "single" rod, with a solitary example of Type XIX (Whole Rod Foundation, Intricate Stitch) ascribable to the BMIII occupation. This is the only occurrence of this type at the site. After a hiatus in PI, "single" rod foundation types and allied variants are found throughout the remainder of the sequence. "Single" rod Type VII (Whole Rod Foundation, Interlocking Stitch) appears in PII and constitutes the dominant representative of this foundation category through the Navajo occupation. Type VIII (Whole Rod Foundation, Non-Interlocking Stitch) is confined to Middle PIII, while Types IX (Two Rod Horizontal Foundation, Non-Interlocking Stitch) and X (Rod With Lateral Bundle Foundation, Non-Interlocking Stitch) are limited to Late PIII.

Two representatives of the bunched foundation category, Types XVI (Two Rod and Bundle Bunched Foundation, Interlocking Stitch) and XVII (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch), appear during

PI and the category persists through the Navajo occupation. While Type XVI is restricted to PI and PII occupations, Type XVII is represented throughout the sequence. Types XIV (Two Rod and Welt Bunched Foundation, Non-Interlocking Stitch) and XV (Three Rod Bunched Foundation, Non-Interlocking Stitch) are confined to Late PIII and Type XVIII (Five Rod Bunched Foundation, Non-Interlocking Stitch) to PIII (subperiod unknown).

Stacked foundation types are the last to appear at Antelope House. Type XII (Whole Rod and Bundle Stacked Foundation, Non-Interlocking Stitch) is confined to the PII occupation and Type XI (Two Rod Stacked Foundation, Non-Interlocking Stitch) is restricted to Late PIII. Type XIII (Two Rod and Bundle Stacked Foundation, Non-Interlocking Stitch) is included in the 11.7 percent of the coiling assemblage which is of unknown age.

Stitches. Despite the preponderance of simple stitch types at Antelope House, the earliest stitch type is a single example of intricate stitches in BMIII. This stitch pattern does not recur.

The two simple stitch types, non-interlocking and interlocking, appear in PI and PII, respectively, and both persist throughout the occupation of the site. Stitches accidentally split on one or both surfaces are present from PI through the Navajo occupation. Functionally specialized stitches (e.g., double stitches or wrapping stitches ued as expansion stitches) also span the sequence from PI through Navajo.

Centers. "Plain" continuous coil centers occur in all periods from PI through Navajo. Reinforced continuous coil centers occur first in PII, recurring in the Late PIII and Navajo occupations. Flattened continuous coil centers appear in Early PIII and one example is ascribable to PIII (subperiod unknown). Only one continuous coil center is of unknown age.

Rims. Self rims are documented at Antelope House from PII through Late PIII. False braid rims are restricted to Early and Middle PIII. One combination of a self rim and 1/1 false braid rim is ascribable to PIII (subperiod unknown). A modified self rim with added wrapping stitches occurs in Early PIII.

Work Surface. Concave and convex work surfaces are present at Antelope House from PI through Late PIII. Concave work surface is represented in the Navajo occupation. Concave work surfaces predominate throughout the sequence.

Work Direction. Right-to-left is the preferred work direction at Antelope House from BMIII through Navajo. Occurrences of the opposite work direction are restricted to PII and Middle PIII, with one example of unknown age.

Splices. The earliest splice type at Antelope House is fag and moving ends bound under, which first appears in PI and continues as the preferred splicing technique through Middle PIII. Splices with fag ends clipped short and moving ends bound under occur in PII, Early PIII and Late PIII. During Late PIII, this splicing method and fag and moving ends bound under are equal in relative frequency. The remaining splice types are restricted. Fag ends clipped short and moving ends bound under represents a minority technique in Early and Late PIII. Fag ends bound under with moving ends concealed under stitches occurs only in Middle PIII. Fag ends clipped and concealed under stitches with moving ends bound under is represented only in Early PIII. The remaining splicing techniques, with fag or moving ends absent or obliterated through wear, are encountered ir PI, Navajo or unknown chronological contexts.

Mending and Decoration. The few Antelope House specimens with mends are restricted to Middle PIII. Decorated specimens are ascribable to Late PIII and PIII (subperiod unknown). One decorated specimen is of unknown age.

Form and Function. The three principal coiled vessel forms at Antelope House—shallow trays, shallow bowls and steep-sided bowls—coexist from PII to Late PIII, with shallow trays predominating. Shallow trays also are represented in the Navajo occupation and form the bulk of the container assemblage of unknown age. Bifurcated base carrying baskets are ascribable to Early PIII and PIII (subperiod unknown). The single bifurcated base ceremonial basket occurs in Middle PIII. Parching trays are restricted to PI and Late PIII.

It is perhaps significant that throughout the Antelope House sequence, the frequency of coiled vessel forms remains relatively constant. This continuity presumably reflects a lack of functional changes in the coiling industry itself. This conclusion is, in turn, supported by the lack of major changes in the frequency and type of wear patterns found in coiled vessels.

Raw Materials. All three of the major genera of raw materials employed at Antelope House for the production of coiling span virtually the entire occupation sequence. Though *Rhus* actually is the first to occur, in a BMIII context, both *Salix* and *Yucca* are present by PI. All three persist for the rest of the sequence.

The persistence of *Rhus* and *Salix* is directly attributable to their patently superior qualities as coiling construction media. No other plants available to the Antelope House weavers possessed their unique combination of toughness, flexibility and ease of working. The characteristically shiny appearance of *Rhus* provided an extra bit of aesthetic appeal to baskets so stitched. *Yucca* was the preferred source for bundles throughout the sequence because of the relative ease with which fibers could be separated from the parent mass. Again, few plants available in the Antelope House area had this highly desirable quality.

Specific identification of *Yucca* was generally not possible for the majority of the Antelope House coiling sample because of the relatively fine state of the retted fibers. The few certain examples of *Y. angustissima* are ascribable to Late PIII or are of unknown age.

Internal Distribution and Relationships

The coiling assemblage at Antelope House is differentially distributed. Fifty-nine and seven-tenths percent of the coiling assemblage was recovered from the South Area/South Room Blcok and 20.8 percent was derived from the North Room Block/North Area. The remaining 19.5 percent is ascribable to the Central Room Block. Only the numerically dominant Type XVII has pan-site distribution. The slightly less common Type VII occurs in both the South Area/South Room Block and North Room Block/North Area, but is absent from the Central Room Block.

The remaining minor coiling types are, with one exception, restricted to one or another of the principal architectural units. The entire stacked foundation component of the coiling assemblage, including Types XI (Two Rod Stacked Foundation, Non-Interlocking Stitch), XII (Whole Rod and Bundle Stacked Foundation, Non-Interlocking Stitch), and XIII (Two Rod and Bundle Stacked Foundation, Non-Interlocking Stitch), is confined to the South Area/South Room Block. Two "single" rod types, VIII (Whole Rod Foundation, Non-Interlocking Stitch) and IX (Two Rod Horizontal Foundation, Non-Interlocking Stitch), are found only in the North Room Block/North Area. Six different types, including two "single" rod variants (Types VI, Bundle Foundation, Non-Interlocking Stitch, and X, Rod with Lateral Bundle Foundation, Non-Interlocking Stitch), two bundle foundation variants (Types XIV, Two Rod and Welt Bunched Foundation, Non-Interlocking Stitch, and XV, Three Rod Bunched Foundation, Non-Interlocking Stitch) and the sole open coiling variant (Type XIX, Whole Rod Foundation, Intricate Stitch) occur only in the Central Room Block. Type XVI (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch) appears in both the South Area/South Room Block and the North Room Block/North Area.

Interlocking stitch patterns are concentrated in the South Area/South Room Block, non-interlocking patterns in the Central Room Block and North Room Block/North Area. To a somewhat lesser extent, certain other basic technical attributes of the coiling industry parallel the differential distribution of foundation types and stitch patterns. Splice types in the South Area/South Room Block include many more varieties than either the Central Room Block or North Room Block/North Area. False braid rims, flattened continuous coil centers and minority coiled vassel forms are concentrated in the South Area/South Room Block and are seldom evidenced in other architectural units of the site.

The distribution of raw materials used in the manufacture of coiled basketry is more or less continuous across the site, with the three principal genera represented in all major architectural units. This even distribution of preferred construction materials is not unexpected, given the highly desirable qualities of *Rhus, Salix* and *Yucca* cited above.

The differential distribution of coiling types, stitch patterns and certain other attributes suggests either temporal or social separation of basket makers or groups of basket makers within the Antelope House population.

Certainly, there is a time factor involved in the apparent clustering of foundation types, stitch patterns, etc. within one or another architectural unit of the site. While PI (6.5 percent of the coiling assemblage), PII (11.7 percent) and Early PIII (12.9 percent) materials are very common in the South Area/South Room Block, they are absent from the Central Room Block and only

Table 147. Rotated factor matrix for Type XVII coiling (Two Rod and Bundle bunched Foundation, Non-Interlocking Stitch). N = 36. Starred (*) items represent significant loadings.

	Factors				
	I	*II*	*III*	*IV*	*Communalities*
1. Diameter of coils	.03	−.93*	.08	.10	.89
2. Coils per centimeter	−.36	.78*	.01	.28	.82
3. Width of stitches	.85*	−.25	−.13	.09	.80
4. Gap between stitches	.69*	.26	.46*	−.03	.76
5. Stitches per centimeter	−.77*	.20	.07	−.03	.64
6. Period	−.07	−.11	.94*	.03	.91
7. Area	.08	.05	.03	.98*	.97
% Variance	27.6	23.7	16.1	15.0	82.7

scantily represented in the North Room Block/North Area. Similarly, Middle PIII coiling (10.4 percent of the coiling assemblage) is largely confined to the South Area/South Room Block. Only during Late PIII is coiling represented in all parts of the site. Significantly, the Late PIII coiling assemblage (37.7 percent of the sample) exhibits the same spatial separation of foundation types, stitch patterns and other construction attributes as does the entire coiling sample when treated as a unit at time 0.

In order to further elucidate the character of the apparent clustering within the Antelope House coiling industry, the two most common types, VII (Whole Rod Foundation, Interlocking Stitch) and XVII (Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch), were subjected to a series of statistical analyses.

Type XVII Data Structure and Distribution. Seven variables were factored to determine the structuring of habits or patterns relative to the manufacture of this coiled basketry type through time and space. Five of these attributes were measurements primarily directed toward the isolation of variant motor habits and skills within the framework of a technological type. The sixth and seventh variables were designed to monitor the behavior of these attributes temporally and spatially at the site. The variables are (1) diameter of coil, (2) coils per centimeter, (3) width of stitch, (4) gap between stitches, (5) stitches per centimeter, (6) period, and (7) architectural unit. Periods were numbered consecutively from earliest to latest, while areas of the site were numbered sequentially from south to north.

Four factors calculated by the principal axis method (a version of BMDO8M modified by J.D. Gunn to plot factor scores) were rotated to varimax criteria. The number of factors rotated was selected on the basis of eigen-values greater than 1.0. The four factors accounted for 83 percent of the variance in the data matrix, which contained 36 examples of Type XVII coiling. The rotated factor matrix is presented in Table 147.

As indicated, time and architectural unit have no great relationship to any of the selected attributes, with the possible exception of stitch gap (Factor III), which appears to become greater with the passage of time. Factors I and II show that coil characteristics and stitch characteristics have a marked tendency to behave independently of each other, as indicated by their occurrences on separate orthogonal or independant factors.

In order to examine the distribution of characteristics more thoroughly, factor scores for Factors I and II (i.e., those factors most intimately connected with the basic manufacturing process) were plotted and the point for each coiling specimen was coded for its provenience in the site (Fig. 205). Lines encircle specimens from (1) the South Area/South Room Block, (2) the Central

Table 148. Rotated factor matrix for Type VII coiling (Whole Rod Foundation, Interlocking Stitch). N = 26. Starred (*) items represent significant loadings.

	Factors			
	I	*II*	*III*	*Communalities*
1. Diameter of Coils	.20	−.58*	.62*	.76
2. Coils per centimeter	.21	.11	−.73*	.58
3. Width of stitches	−.56*	.34	.58*	.76
4. Gap between stitches	−.88*	−.05	.00	.77
5. Stitches per centimeter	.90*	.03	−.21	.84
6. Period	−.06	.11	.56*	.34
7. Area	.10	.90*	.10	.84
% Variance	28.5	18.4	23.1	70.0

Room Block, and (3) the North Room Block/North Area.

There is no separation of architectural units on the horizontal axis (Factor I) of the plot, which indicates that basket weavers from all over the site made use of coiling elements within about the same range of variation. The only notable phenomenon in this dimension is that South Room Block weavers seem to have employed elements with a greater extreme of variation than did those in the other architectural units.

The southern sector of the site is as nondescript on the vertical axis as it is on the horizontal axis. There is, however, a notable tendency for the North Room Block and the Central Room Block to locate in different parts of the factor space. To insure that the apparent clusterings were not illusory, a T-test was calculated on the Factor II scores for both groups of specimens. The difference in distribution is significant at .02 level of probability. An assessment of the Factor II loadings (Table 147) indicates that the makers of coiled baskets in the Central Room Block were using coiling elements significantly larger than those used in the North Room Block. Conversely, the occupants of the South Area/South Room Block used the full size range of coiling elements available at Antelope House.

Of the 30 specimens of Type XVII placed in time, 50 percent are ascribable to Late PIII. Sample sizes from the other periods never exceeded four, rendering it virtually impossible to delineate changes in Type XVII coiling habits through time. The only apparent conclusion that may be drawn from the factor scores is that Late PIII weavers produced a few containers with larger coiling elements than did anyone before or after them.

Type VII Data Structure and Distribution. Identical attributes for a sample of 25 specimens of Type VII coiling were treated in the manner described above. Three factors with eigenvalues greater than 1.0 resulted. These factors collectively accounted for 70 percent of the variance in the data matrix. The Type VII factor structure (Table 148) is more complex than that of Type XVII. First, the three stitch attributes do not behave independently. Second, the coil or foundation characteristics, as well as some of the variance from stitch width, appear to interact both with each other and with the spatial-chronological indicators.

Factors II and III show relationships between coiling attributes, time and space. Factor II indicates that specimens with large coil diameter tend to occur in the southern sector of the site, while small coil diameters generally are confined to the north.

Factor III indicates that coil diameter and width of stitch increased with the passage of time. The use of rods of larger diameter is apparent as one moves north in the site.

Table 149. Rotated factor matrix for intricate plaited selvages. N = 155. Starred (*) items represent significant loadings.

	Factors				
	I	*II*	*III*	*IV*	*Communalities*
1. Diameter of plaiting elements	.79*	.01	.10	.05	.64
2. Angle of crossing of plaiting elements	.16	.03	6.0	.69*	.51
3. Post 90° apex fold plaiting sequence (sub-type)	.02	.93*	−.02	−.02	.87
4. Overlap of terminal element after final interval	.63*	−.43*	−.18	.10	.62
5. Terminal element trimming angle	−.22	−.04	.76*	−.26	.70
6. Width of selvage	.75*	.50*	−.11	−.11	.83
7. Period	.17	.02	.73*	.32	.66
8. Architectural unit	−.14	−.09	−.05	.73*	.57
% Variance					67.6

While the chronological trend toward progressively larger rods may be general across the site, the continued separation of the northern and southern sections of Antelope House during Late PIII can only be attributed to non-temporal factors. Further, since raw materials are a constant through time, this clustering is probably a function of some variety of social separation relative to residential units and, presumably, kinship.

Despite the poor preservation of some of the extant coiling assemblage and its small size, it is our belief that the statistical analysis, viewed in conjunction with the differential distribution of foundation types, stitch patterns, rims, centers, etc., supports the existence of at least two and perhaps three "groups" of basket makers ("micro-traditions" of basket making) within the Antelope House population.

Plaiting

Plaiting, represented by four structural types, accounts for some 75.65 percent of the total Antelope House basketry sample. While the 466 plaiting specimens appear to represent an unusually high number of individual mats, ring baskets, bags and other forms from a single site, an exact ratio of individual "containers" to fragments cannot be calculated. Because of the great difficulty in matching individual fragments of plaiting (with or without selvage) which may be portions of the same original form, all percentages used in this section are of the total fragment sample, unless otherwise specified. The distribution and frequency of plaiting types is presented in Table 138 by raw material, period and provenience.

Technology

Of the four plaiting types present at Antelope House, three are twill plaiting variants and one is simple. Collectively, twill plaited types account for 87.34 percent of the total plaiting sample, simple plaiting types for 12.66 percent.

Types. Type XXI (Twill Plaiting, 2/2 Interval) is the most common plaiting construction, accounting for 79.83 percent of the total plaiting sample and for 91.40 percent of all twill plaited specimens. Types XXII (Twill Plaiting, 3/3 Interval) and XXIII (Twill Plaiting, 4/4 Interval) account for fewer specimens and for a smaller percentage of the total plaiting sample than does simple plaiting Type XX.

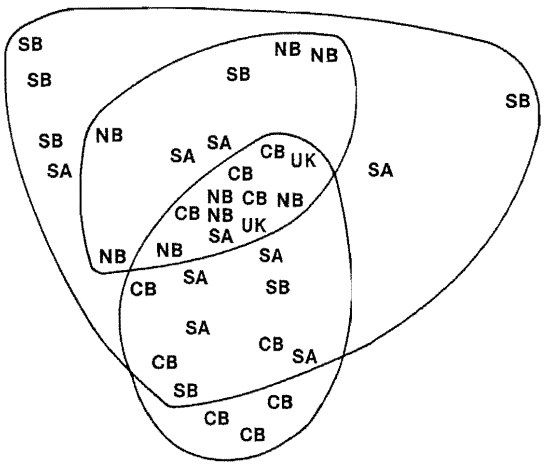


Figure 205. Plot of factor scores for Factors I (horizontal) and II (vertical) with Type XVII coiled basketry points coded for location within Antelope House.

Shifts. Intentional shifts are employed in all Antelope House plaiting types, both in the basic construction process and in the production of decorative patterns. Accidental shifts, or plaiting interval "errors," also are found in all types and may be distinguished by their irregularity and by the haphazard appearance they impart to the finished specimen.

Selvage. Three hundred fifty-four specimens, representing 75.76 percent of the total Antelope House plaiting sample, possess identifiable selvages. Of these, 166 (47 percent) are of the self type and 186 (52.54 percent) are of some subtype of intricate selvage. Two specimens, representing .56 percent of the plaiting sample with selvage, are of the continuous selvage type.

Self selvages include 131 specimens of the 90° variety, representing 37.01 percent of the plaiting with selvage sample, and 35 specimens with 180° variants, constituting 9.89 percent of the plaiting with selvage assemblage.

Subtype II intricate selvages account for 79.03 percent of the total intricate selvage sample and for 41.53 percent of all plaiting with selvages. None of the remaining subtypes represents more than 9 percent of the intricate selvage sample or 5 percent of all selvages.

Wefts on specimens of intricate selvage with twining are 2-ply unspun S-twist in 93.8 percent of the cases, and 2-ply unspun Z-twist in 5.32 percent. One example of intricate selvage with twining, representing .88 percent of the intricate selvage sample, has 2-ply Z-spun S-twist cordage wefts.

Even a cursory inspection of the Antelope House plaiting assemblage indicates that there is a marked correspondence between certain selvage techiques and "vessel" configurations. Intricate selvages occur only on plaited mats, 180° self selvages are restricted to ring baskets and to some bag forms, 90° self selvages are usually found on mats, bands, pot rests and most other minority forms, and continuous selvages occur only on tumplines. Given this correspondence, it is clear that the incidence of a particular selvage is not dictated by any local preference for that selvage, but rather by the frequency of one or another plaiting configuration. The association of a particular selvage with a particular plaiting form is, in turn, dictated by the functional requirements of that form and probably by little else. This situation contrasts sharply with coiling, where self rims predominate over false braid rims on all vessel forms, apparently by choice alone.

Mending and Decoration. The incidence of mending in the plaiting assemblage is very low (<5 percent of the total sample) and usually involves little more than the addition of a single reinforcing or binding element; in rare instances a circuit of simple twining may be added. The low frequency of mending in this subclass is partially explainable by the relatively high incidence of structural features designed explicitly to combat fraying and wear. All intricate selvages, whatever their aesthetic appeal, serve principally to reinforce the edges of mats. Integral (i.e., non-added) circuits of simple twining on mat selvages, ring baskets and some bags and other forms serve the same basic function. With the possible exception of twining, no other subclass at Antelope House has these built-in precautions against heavy wear.

If we omit the intricate selvages that may be construed as decorative, decoration in the Antelope House plaiting assemblage is largely restricted to ring basket centers and pot rests. In both cases, shifts are regularly employed to produce geometric patterns. As noted in the type descriptions, all ring basket patterns are variations of plain meanders or plain concentric diamonds; very rarely, plaiting elements of alternate

colors are used to produce linear designs, the most notable of which is a Type XXI pot rest. One plaited specimen, a Type XXI tumpline, is decorated with running stitches of human hair.

Form and Function. The principal plaiting form at Antelope House is matting, which accounts for 65.67 percent of the total plaiting assemblage. Bands constitute the next most abundant configuration, accounting for 14.11 percent of the total sample, followed, in descending order, by ring baskets (13.1 percent) and bags (3.65 percent). The remaining forms, including pot rests, rigid containers, compound and miniature baskets, tubes and tumplines, collectively account for the remaining 3.41 percent of the total plaiting sample.

As in the twining subclass, all plaited mats appear to have been rectangular, with no obvious top or bottom. Again, moderate to heavy wear on one or both surfaces attests to the extensive use of these specimens as floor coverings or as "flattened receptacles" upon which a variety of items may have been temporarily placed or stored. A few mats apparently were employed as burial shrouds or as covering. The presence of wear on only one surface of many plaited mats, coupled with a high incidence of specimens heavily worn on one side and lightly worn on the other, strongly suggests that these items were not turned over until they had been extensively abraded on one surface (cf. twined mats).

Most ring baskets exhibit wear on one or both surfaces, but the character of the interior abrasions is different from that found in coiled bowls and trays, suggesting that materials of a different composition were carried or stored in containers of each subclass.

Wear patterns on ring baskets generally are much finer, in terms of striations per centimeter and depth of striations, than those found in coiled trays or bowls. The nature of the substance or substances which generated these differential wear patterns, however, is unknown. The persistence of plaited ring baskets side-by-side with coiled trays and bowls of similar configuration suggests a need for containers with two somewhat different sets of properties. Ring baskets are light and flexible, while coiled baskets, at least at Antelope House, are heavy and rigid. The general lack of rigid plaiting or of flexible coiling attests the functionally specific nature of each variety of container and partially explains their persistence throughout the sequence.

While most other plaited forms, notably bands, are moderately to heavily worn, the wear patterns are undiagnostic and do not suggest specific function or functions.

Raw Materials. Five genera of raw materials were used in the manufacture of plaited basketry at Antelope House. Of these, *Scirpus* and *Yucca* were most often employed representing 59.87 percent and 39.05 percent of the total plaiting assemblage, respectively, with *Typha, Salix* and *Zea,* in descending order of frequency, accounting for the remaining 1.08 percent.

Specific identification is possible for all *Yucca* specimens of this subclass; *Y. angustissima* accounts for 68.13 percent of all *Yucca* specimens, *Y. baccata* for 31.31 percent, and a single specimen of leaves of both species for the remaining 0.56 percent.

There is a strong correspondence between gross plaiting configuration, or vessel form, and preferred raw material. *Scirpus* is employed almost exclusively in the production of mats and *Yucca* generally is used for ring baskets, bands and other non-matting forms. While some mats are made of *Yucca,* this genus clearly was a second choice. The infrequent use of the other raw materials suggests that they were employed only when there was no *Scirpus* or *Yucca* close at hand.

Preparation of all raw materials used for plaiting involved either simple immersion or immersion followed by longitudinal splitting.

Chronology

As Table 138 shows, plaiting is continuously represented at Antelope House from BMIII through historic occupations. It is the dominant basketry subclass throughout the sequence at Antelope House, representing no less than 50 percent of the total basketry sample during any one period.

Types. Types XX (Simple Plaiting, 1/1 Interval) and XXI (Twill Plaiting, 2/2 Interval) are the earliest and longest lived plaiting types at Antelope House. Both appear in BMIII and persist through the Navajo occupation. Type XXI also is present in the historic period. Type XXII (Twill Plaiting, 3/3 Interval) appears in PII and continues through Navajo, while Type XXIII (Twill Plaiting, 4/4 Interval) is restricted to Late PIII.

Shifts. Both accidental and intentional shifts are represented throughout the Antelope House sequence.

Selvage. The earliest selvage types at Antelope House are 90° self and intricate, which appear in BMIII and span the sequence through Navajo. Both 90° self and intricate selvages are relatively common throughout the history of the site, with intricate selvages markedly more popular only during Late PIII. Self selvages of the 180° variety are first evidenced in PII and continue through the Navajo occupation as a minority selvage type.

Intricate selvage Subtype II has the greatest longevity of any of the intricate selvage variants, persisting from the BMIII through Navajo occupations. Subtype II is the dominant intricate selvage variant in each of these periods, except PII. Subtype I occurs from PII through Late PIII. Subtypes III and IV occur in both Middle PIII and Late PIII, while subtypes V and VI are confined to Middle PIII and Late PIII, respectively.

Twining reinforcements on intricate selvages first appear in PI and continue through Late PIII. Intricate selvages without twining have a slightly greater longevity, appearing in BMIII and continuing through Navajo.

Form and Function. Matting, the dominant plaiting configuration at Antelope House, is represented from BMIII through Navajo, with a hiatus in Early PIII. Ring baskets occur from PII to the historic period. With the notable exception of plaited bands, which appear in PII and persist through Navajo, no other plaited form is found in more than two periods. Pot rests are restricted to Middle PIII and Late PIII, while rigid containers and petates occur only in Late PIII. Compound plaited baskets are confined to single occurrences in PII and Late PIII. The sole miniature plaited basket is ascribable to the PI occupation.

There is no evidence for functional changes within any of the plaited forms which persist through several periods.

Mending and Decoration. Direct evidence of mending is available from PII through Late PIII. Decorated specimens (excluding intricate selvage as decoration) occur sporadically from PII through Navajo, with the highest incidence of decoration in Late PIII. During this period, geometric designs produced with intentional shifts are relatively common on ring basket centers.

Raw Materials. Few trends are apparent in the use of raw materials for plaiting manufacture through time. *Scirpus* is relatively common throughout the sequence and is notably abundant in Late PIII. One or another species of *Yucca* also is employed from BMIII through the historic period. *Y. angustimssima* is consistently more common than *Y. baccata* in all periods, except during BMIII and the historic, when their frequencies are equal. *Salix* and *Zea mays* are restricted to Middle PIII and *Typha* occurs only in Late PIII.

Internal Distribution and Relationships

The plaiting assemblage is differentially distributed. Sixty-seven and eight-tenths percent of the plaiting assemblage was recovered from the South Area/South Room Block and 17.4 percent from the North Room Block/North Area.

Simple plaiting Type XX (1/1 Interval) and twill plaiting Type XXI (2/2 Interval) occur in all architectural units of the site. Type XXII (Twill Plaiting, 3/3 Interval) is present in the South Area/South Room Block and Central Room Block, but is absent from the North Room Block/North Area. Conversely, Type XXIII (Twill Plaiting, 4/4 Interval) occurs only in the North Room Block/North Area. The differential distribution of plaiting types is not directly paralleled in the spatial incidence of selvage types. Self selvages of the 90° and 180° varieties occur in all major architectural units of the site, as do intricate selvages. Continuous selvages are restricted to the South and Central Room Blocks.

Only intricate selvage Subtype II has pan-site distribution. Subtype I occurs only in the South Area/South Room Block and Central Room Block; Subtype III is present in all areas but the Central Room Block. Subtype IV is present in the South and North Room Blocks, while Subtypes V and VI are found only in the South Room Block.

The major plaiting forms at Antelope House, including mats, bands, bags, ring baskets and pot rests, have pan-site distributions. The minor configurations generally are restricted to one or, at most, two architectural units.

Petates occur only in the South and North Room Blocks, compound plaited baskets in the South Area, miniature plaited baskets in the North Room Block, tumplines in the South and Central Room Blocks, tubes in the South Room

Block and rigid containers in the Central Room Block.

There is no evidence that the functions of any of the matting forms varied from one part of the site to another.

The distribution of principal raw materials is once again more or less even across the site, with *Yucca* (*Y. angustissima* and *Y. baccata*) represented in all major architectural units. The minor raw materials, including *Zea mays*, *Salix* and *Typha*, are restricted to the South Area/South Room Block.

The chronological distribution of plaiting by area more or less parallels that of the other basketry subclasses. Basketmaker III plaiting is represented only in the North Room Block, while PI and PII materials occur both in the South Area/South Room Block and in the North Room Block. Early PIII plaiting is restricted to the South Area/South Block and the Central Room Block, while Middle PIII and Late PIII plaited wares have pan-site distribution. Plaiting ascribable to the Navajo and historic occupations is concentrated in the South Area/South Room Block.

Certain features of the spatial distribution of plaiting once again tend to suggest the existence of separate populations of weavers and/or of microtraditions of weaving at Antelope House. The strongest support for this premise in the plaiting assemblage is the differential distribution of basic plaiting types. The lack of Type XXII plaiting (Twill Plaiting, 3/3 Interval) in the North Room Block/North Area is not readily explainable by differential preservation or by temporal factors.

While this construction technique is a minority plaiting type, it is not uncommon in other sections of the site. Moreover, 52 percent of all Type XXII plaiting occurs during Late PIII and it is specifically during this period that the technique is absent from the North Room Block/North Area. Interestingly, Type XXIII (Twill Plaiting, 4/4 Interval) is found only in the North Room Block, again during Late PIII.

In order to statistically test the possibility that two or more groups of basket makers were operating contemporaneously at Antelope House, eight variables on a population of 185 mat fragments with intricate selvage were treated in the manner described above for Types VII and XVII coiling. This assemblage was selected for analysis because of its pan-site distribution, large sample size and structural conplexity.

Data Structure and Distribution. The eight variables examined in the intricate selvage sample are (1) diameter of plaiting elements, (2) angle of crossing of plaiting elements, (3) post-90° apex fold plaiting sequence (subtype),(4) overlap of terminal element after final interval, (5) terminal element trimming angle, (6) width of selvage, (7) chronological period and (8) architectural unit.

While Variables 1, 2, 3, 6, 7 and 8 are self explanatory, Variables 4 and 5 require further comment. In all intricate selvages, whatever the sequence of folds or intervals, the final manipulation of the terminal element requires that it be secured under another plaiting element. The distance that this secured element protrudes from beneath the element which binds it is called the overlap (Variable 4). The regularity of the overlap is, in turn, maintained by cutting or trimming the protruding element whenever necessary. The angle at which the protruding element is trimmed relative to the outside edge of the selvage is measured and represented in Variable 5. Due to the fragmentary state of some of the selvages, data on Variables 4 and 5 were unavailable; the sample, therefore, was reduced to 155.

Four factors accounted for 68 percent of the variance. The factor matrix is presented in Table 149.

Factor I appears to reflect site characteristics. As plaiting element diameter increases, so do selvage width and overlap. Factor II is related primarily to the post-90° apex fold plaiting sequence and to the width of the selvage. Not surprisingly, as the number of plaiting intervals increases, so does overall width of the selvage. Interestingly, overlap is negatively related both to the post-90° apex fold sequence and to width of selvage, suggesting that terminal elements were trimmed at more or less the same distance in any kind of intricate selvage mat. Factors I and II are not influenced by spatial or temporal characteristics, probably reflecting only the basic mechanical requirements of the plaiting process and, perhaps, the physical characteristics of raw materials.

This clearly is not the case with Factors III and IV. Factor III indicates that terminal element trimming angle and period are related. As time passed, weavers trimmed the ends of the elements at progressively higher angles to the sel-

vage margin. This tendency seems to have been universal across the site. Factor IV shows that there is a strong tendency to cross elements at a greater angle in the northern part of the site at all periods. Given the highly idiosyncratic character of preferred plaiting angle, this factor almost certainly reflects the operation of different groups of weavers in various architectural units of Antelope House. While it is not possible to present a meaningful plot of factor score loci for 155 points, the clear separation of the northern sector from the rest of the site is readily apparent.

Again, it is our belief that the statistical analysis, in conjunction with the differential distribution of plaiting types, tends to support the coexistence of at least two separate groups of basket makers (or microtraditions of basket weaving) within the Antelope House population.

Miscellaneous Fiber Constructions

Miscellaneous fiber constructions, represented by 11 arbitrary categories, account for some 6.82 percent of the total basketry sample. The 42 miscellaneous specimens represent a minimum of 41 different objects. The distribution of miscellaneous fiber constructions is presented in Table 144 by category, raw material, period and provenience.

Technology

For discussion, the 11 categories of miscellaneous fiber constructions may be lumped into three gross groups: plaited objects, nonplaited objects and construction material. Plaited objects include established forms (e.g., mats) with unknown or variable intervals, as well as such nondescript items as patches and flat plaited rectangles. This group accounts for 28.57 percent of the total miscellaneous sample and for 29.26 percent of individual miscellaneous objects. Nonplaited objects include such amorphous items as fiber-wrapped twigs and rods, figure-8 stitch hoops, figure-8 and zigzag doodles and latticework constructions. This group represents 52.38 percent of the total miscellaneous sample and 53.66 percent of all miscellaneous objects. The contents of the construction material group require no enumeration. Construction materials constitute 19.05 percent of the total miscellaneous sample and 17.08 percent of the individual miscellaneous objects.

Plaited Objects. With the exception of the variable interval perforated "handle," the representatives of this assemblage are in most recognizable particulars identical to their form counterparts in any of the plaiting subclass types. Only the fragmentary state of the miscellaneous plaited objects prevents their assignment to Types XX, XXI, XXII or XXIII. Even the perforated "handle" is readily distinguishable as plaiting and only the great irregularity of the construction intervals prevents its assignment to one or another of the plaiting types.

Non-Plaited Objects. This group represents both the most heterogeneous and the most patently artificial category used in this analysis. The constituents of this catchall taxon have nothing in common, except that they are not plaited. None resemble any other basketry specimens from Antelope House (or anywhere else). Given the amorphous character of this group of objects, any further discussion of their communal technical attributes is pointless.

Construction Material. The technical characteristics of this category are discussed below under "Raw Materials."

Form and Function. Most of the miscellaneous plaited objects are clearly representatives of common Antelope House plaiting configurations, including mats, bands, ring baskets and bags. Given this fact, we may assume that the miscellaneous objects so identified served the same function as did their counterparts in any of the numbered plaiting types. The function of the remaining miscellaneous plaited objects is either conjectural, as in the case of the alleged patches, or simply unknown.

The principal form among the non-plaited objects is the figure-8 stitch hoop, which may represent some sort of container rim, frame or cradle support. Though heavily abraded, the wear patterns afford no clues to the uses of these unusual objects. The function of the remainder of the nonplaited specimens is as enigmatic as their forms. With one possible exception, the latticework constructions may well represent bases of some variety of flexible container or an unusual form of open weave tray.

The function of the construction material is self evident.

Raw Materials. Six plant genera were employed in the production of miscellaneous fiber

constructions. Not unexpectedly, these plant sources are, with one exception, also common in the three major Antelope House basketry subclasses.

The most common raw materials for miscellaneous plaited objects include *Yucca* (usually *Y. baccata*) and, to a much lesser extent, *Scirpus*. Nonplaited objects usually were made of some combination of *Salix*, *Rhus* and *Yucca* (usually *Y. baccata*); two specimens in this category were constructed of *Zea mays* husks.

Plants represented in the construction materials include *Yucca* (*Y. baccata* and *Y. angustissima*), *Scirpus*, *Phragmites* and *Typha*. The condition of these materials provides some insight into the basketry manufacturing process at Antelope House.

The specimens of construction material range from bunches of unmodified elements to complete mat-making "kits." The bunches of unmodified elements were sorted for size to some extent, including overall length and consistency of width. This sorting may represent one of the first post-collection raw material processing operations or it may have occurred while the weaver was in the field. Another, and not necessarily sequential or related operation, is represented in several bunches of longitudinally split leaves, which were carefully cut to desired widths. These specimens may constitute the "rejects" of the initial sorting operation, which had to be modified before use, or they may represent a construction sequence in which no initial sorting for size took place. If the second alternative is correct, then bunches of a desired plant were simply collected and altered to fit standards of size. Another phase of raw material processing is reflected in a mixed bunch of *Yucca* and *Scirpus*, which apparently was immersed, perhaps preparatory to retting. The penultimate step in basketry construction, at least in one subclass, is represented in the *Phragmites* mat-making packages. Cane wraps were cut to desired lengths, sorted for mean diameter and wrapped with cordage elements, which probably were designed to function as wefts in the final stage of mat construction.

Given the abundance of basketry at Antelope House, the incidence of construction material is surprisingly low. Although this condition may be due to sampling error (in that such items went unrecognized and were ascribed to the unmodified floral remains category), it probably reflects the fact that preferred raw materials were not stored for long periods. This, in turn, suggests that the desired raw materials were locally abundant and could be collected and used whenever the need arose.

Chronology

Miscellaneous fiber constructions are continuously represented at Antelope House from PI through Navajo. This category accounts for no more than 4.5 percent of the total basketry assemblage during any one period.

Miscellaneous plaited objects occur from PI through Late PIII, with hiatuses in PII and MPIII. The greatest incidence of this group of miscellaneous constructions is during Late PIII. Nonplaited objects first appear in Early PIII and persist through the Navajo occupation. Most nonplaited objects, notably figure-8 stitch hoops, concentrate in Late PIII. Construction materials are sporadically represented from PII to Late PIII, with their highest incidence in the latter period.

Internal Distribution and Relationships

Miscellaneous fiber constructions are present in all major architectural units, although nearly 60 percent of this category is concentrated in the South Area/South Room Block. Few plaited or non-plaited objects are represented in all portions of the site, with the notable exception of figure-8 stitch hoops. Construction materials, as might be expected, also have pan-site distribution.

Given the heterogeneous character and low frequency of the miscellaneous fiber constructions, little else can be said about this category.

Conclusions

The data presented in the preceeding pages indicate the existence of a long and flourishing basketry industry at Antelope House. An unusually large fragment sample, representing an unusually large number of individual objects, has been allocated to three subclasses of basket weaves and to one miscellaneous grouping.

The many basketry specimens probably represent much, but not all, of the net total of basketry production at the site. The thoroughness and scale of the excavations, coupled with generally excellent preservation, insured the recov-

ery of what must surely be the most representative basketry sample ever derived from a single, multi-component Pueblo site. From this perspective, the sample size does not seem inordinately large; it probably reflects the actual incidence of this class of artifacts relative to other artifact classes at a more or less "typical" site of the period ca. AD 700 to 1200+.

The high proportion of individual containers to fragments is probably a function of a number of interrelated factors. Apparently, the weavers of Antelope House rarely mended worn baskets, preferring instead to discard them and to construct new ones. This, in turn, is probably due to the local abundance of raw materials, which could be tapped at will. Given these conditions, it is not surprising that little time was devoted to mending used containers. Old containers, mats, bags and the like probably were used until exhausted, at which time they were deposited, in a more or less intact state, in one of the site's refuse areas (e.g., Rooms 1, 21 and 29). Given the relatively low rate of post-disposal attrition which probably characterized these dumps, it is not surprising that so many individual containers are represented. A roughly analogous situation is well documented in prehistoric northern Coahuila (Adovasio 1974b); hence, the Antelope House case can hardly be regarded as unique.

In retrospect, the salient features of the Antelope House basketry assemblage are as follows. Twining, coiling, and plaiting are clearly of unequal importance at Antelope House. Twining, as a basketry subclass, is sparsely represented in all periods, both in absolute frequency of specimens and in types, as well as in variety and complexity of forms, selvages, etc. Viewed in this light, twining as a construction method clearly is in its death throes at Antelope House. Coiling, while characterized by a proportionately great variety of types and a very high degree of technical sophistication, still is a minority component of the basketry industry. Coiling forms are severely restricted and their incidence and character bespeak an industrial component that is slowly being phased out. Plaiting clearly was preferred for baskety production. Although it is represented by only four types, it is the most vital and heavily relied upon component of the basketry industry. The range of plaiting forms is relatively great and the degree of technical sophistication, notably in ring baskets and intricate selvage mats, eclipses any segment of the twining assemblage, as well as certain products of the coiling sample.

The popularity of plaiting probably rests, to a large extent, in the facility with which it could be manufactured, relative to the other subclasses, as well as in the usurpation of many of the functions of twined and coiled containers by ceramics. Since the principal products of the plaiting industry (matting and light flexible baskets) could not be produced ceramically, this basketry subclass retained or, perhaps, increased its popularity after the advent of pottery manufacture.

Despite the mutability of the various basketry subclasses, the industry as a whole is relatively conservative. Little change is apparent in either the form or function of basketry throughout the Antelope House sequence.

This formal and functional conservatism is eclipsed by the tenacity with which Antelope House basket weavers clung to their favored raw materials. Apparently, once a plant was found to be suitable for the manufacture of some specific basketry product the use of that plant became "permanently" established. Only if the product were discontinued would the incidence of that particular plant resource diminish or disappear. While similar situations have been documented prehistorically (Adovasio 1975a), the Antelope House example represents an extreme case.

A final comment on the socio-cultural implications of the basketry industry is warranted. As noted above, it would appear that several distinct groups of weavers were operating simultaneously at Antelope House, at least during Late PIII. Moreover, it seems that these groups may be linked to specific residential units of the site. While we have little doubt about the reality of these groupings, we do not, nor would we care to, comment on their composition. Reconstructing prehistoric social organization is a perilous task and to attempt it on the basis of even a large basketry sample is beyond our competence.

External Correlations

The 616 basketry specimens described and discussed here constitute one of the largest and best controlled basketry collections ever re-

covered from a single site (Anasazi or otherwise) in the Greater American Southwest. Though detailed comparisons of this basketry assemblage with others recovered from the same physiographic and cultural province are both warranted and potentially profitable, such comparisons are not attempted in the present work, the principal aims of which are descriptive and analytic. Comments on external correlations are limited to the following brief observations.

In most particulars, the Antelope House basketry assemblage is consistent with others from Anasazi sites. While the BMIII through PII samples from Antelope House are relatively small, there are several notable correspondences with materials from other localities. The single piece of Type XIX (Whole Rod, Intricate Stitch) coiling ascribable to the BMIII component represents a well-dated open coiling variant. This technique occurs only in BMII or III contexts and is reported for a large number of sites from the San Juan River country to the Prayer Rock district. This coiling type occasionally is encounterd in non-Anasazi contexts (see Adovasio 1970a, 1971, 1975b, 1975c), but its occurrence outside the Puebleo area is rare. The early Types XX (Simple Plaiting, 1/1 Interval) and XXI (Twill Plaiting, 2/2 Interval) plaiting from Antelope House have analogues in contemporaneous sites, although the intricate selvage type from our sample represents its first published occurrence in a BMIII context. The lack of twining in the BMIII component at Antelope House may reflect either differential preservation or the local unpopularity of this construction method.

The small PI assemblage from Antelope House includes one coiling type (XVII: Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch) previously reported in PI contexts, as well as the first published occurrence of Type XVI (Two Rod and Bundle Foundation, Interlocking Stitch) coiling from this period. Pueblo I coiled vessel forms from Antelope House correspond to known or postulated container configurations for this time horizon (see Morris and Burgh 1941: Fig. 11), although carrying baskets are absent. Plaited ring baskets first occur at Antelope House during PI, again duplicating a phenomenon noted in contemporaneous sites (McGregor 1965: pp. 245–246). The PI intricate selvage matting from Antelope House has no known parallel. However, twined matting, which is reportedly abundant in PI sites, is nowhere in evidence at Antelope House.

It is somewhat difficult to compare our PII basketry sample to those from other sites, since the sum of all other known PII basketry specimens is less than the Antelope House assemblage for this period. The PII collection from Antelope House includes one coiling type (XVII: Two Rod and Bundle Bunched Foundation, Non-Interlocking Stitch) previously reported for this period, as well as the first documented occurrence of Types VII (Whole Rod Foundation, Interlocking Stitch), XII (Whole Rod and Bundle Stacked Foundation, Non-Interlocking Stitch) and XVI (Two Rod and Bundle Bunched Foundation, Interlocking Stitch) in PII contexts. While Type VII dominates the Antelope House coiling assemblage for this period, it is not known whether this reflects a general or local trend. The occurrence of Type XII at Antelope House is somewhat unusual, as this technique is exceedingly uncommon outside the Fremont sphere in Utah; the only use of this coiling technique among the Anasazi occurred along the Fremont Frontier in the Virgin River area. Given the small size of the total known PII coiled basketry sample, it is probably unwise to label this technique as intrusive, although this may well be the case.

The PII coiled vessel configurations at Antelope House correspond to known or postulated PII forms, although the carrying basket still is absent.

The meager collections of PII plaiting and twining from other sites tend to duplicate the types and forms reported at Antelope House; however, the selvage techniques and other construction details are entirely different. Although the full significance of this disparity is presently unknown, it is suggested that local differentiation in Anasazi basketry industries was pronounced by the end of this period.

The extensive and well dated PIII basketry sample from Antelope House constitutes both the largest corpus of basketry material ascribable to this period and the most "atypical" PIII assemblage ever analyzed and described. In a great number of features, the PIII basketry from Antelope House is consistent with PIII basketry from other Anasazi sites; the high frequency of plaiting and correspondingly low incidence of twining and coiling are common characteristics; and the high frequency of two rod and bundle

bunched foundations, non-interlocking stitches, right-to-left work direction, normal centers, tray and shallow bowl vessel forms and decorative designs are "typically" PIII. The range of Antelope House plaiting types, vessel or receptacle configurations and decorative patterns are duplicated at dozens of PIII sites. There are, however, certain differences.

The high incidence of whole rod foundation coiling with an interlocking stitch is not paralleled at any published Anasazi site, nor is the very low frequency of three rod bunched coiling explainable by contemporary trends. The absence of open coiling, coupled with the high number of coiled foundations (e.g., Type XVIII: Five Rod Bunched Foundation, Non-Interlocking Stitch; Type X: Rod with Lateral Bundle Foundation, Non-Interlocking Stitch; Type XIV: Two Rod and Welt Bunched Foundation, Non-Interlocking Stitch) literally is unheard of. Moreover, the dominant splice types usually associated with PIII coiled basketry (see Morris and Burgh 1941: Fig. 9) either are not represented at Antelope House or are exceedingly rare. Conversely, the dominant Antelope House splices, with fag ends and moving ends bound under, generally are rare to absent at other PIII sites. These disparities are not restricted to the coiling industry. Similar observations may be made on the Antelope House ring basket and mat selvages, both of which seldom occur in other sites of the period. In short, while the PIII assemblage at Antelope House is certainly recognizable as a PIII assemblage, it is not "typically" PIII.

We are not, of course, suggesting that the Antelope House basket makers were individually or collectively deviant from any prevailing Anasazi "norms" or "standards" of basketry manufacture. Rather, we are questioning the alleged "norms" or "standards" themselves. A great degree of typological standardization has heretofore been attributed to Anasazi basketry (notably during PIII), largely on the basis of sample sizes smaller than the sample from a single room at Antelope House. Given the divergences noted above, this standardization would appear to be largely illusory. It now would appear that a significant amount of regional differentiation characterized Anasazi basketry production and that the roots of this regional specialization are of great antiquity. While we believe that the recognition of this variability represents the signal comparative contribution of the analyses reported here, it is assumed that future studies will elucidate the causal factors underlying it.